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Military spouses and the deployment cycle: Exploring the well-being, protective factors, and personal resources of waiting wives

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**Military spouses and the deployment cycle: Exploring the well-being,
protective factors, and personal resources of waiting wives**

by

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Dedication

To my kind-hearted, spirited little girl, Quinn;
you, and your love for *Finding Nemo*, taught me to “just keep swimming.”

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Military spouses and the deployment cycle: Exploring the well-being, protective factors, and personal resources of waiting wives

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Research suggests that the deployment cycle is associated with decreased psychological well-being in military spouses, yet not all individuals married to military service members experience psychopathology. It may be that spouses who do not experience reduced well-being possess personal resources, such as positive emotions, that protect them against the stresses of military life. The primary purpose of this dissertation was to determine the effect of deployment on the well-being of military spouses and examine whether personal resources protected military spouses and enhanced their well-being throughout the deployment cycle.

A synthesis of the existing literature was performed in order to determine the direction and magnitude of the effect of deployment on the psychological well-being of military spouses. For the primary analyses, participants were drawn from a convenience sample of military spouses stationed at Fort Hood, Texas. Meta-analysis, hierarchical linear regression, and structural equation modeling were used to test study hypotheses.

In the first study, a meta-analytic review, deployment was found to have a moderate effect on psychological well-being, such that spouses experienced greater psychological problems during deployment. Two studies were conducted as part of the primary analyses. In the first, positivity was found to moderate the relationship between

stress and depressive symptoms during deployment. Specifically, the relationship between stress and depressive symptoms was stronger for spouses with low levels of positivity. Finally, the third study found that adaptive coping, maladaptive coping, and resilience completely mediated the relationship between positive emotions and depressive symptoms. Of the three mediators, adaptive coping was found to be the most influential.

Together, the results of these three studies illuminate the detrimental effect of deployment on the psychological well-being of military spouses, while providing support for the broaden-and-build theory's proposed roles of positive emotions – broadening, building, and undoing – in a unique population. Study limitations, implications for military spouses, and suggestions for future directions in research are discussed.

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Chapter One: Introduction

Over two million members of the United States (US) Armed Forces have been deployed to the Middle East in support of Operations Enduring Freedom (OEF) and Iraqi Freedom (OIF) since 2001 as part of the Global War on Terror (Tan, 2009). Although the end of OIF led to the withdrawal of all US combat service members from Iraqi soil in December 2011, there are still 68,000 service members currently on the ground in Afghanistan (International Security Assistance Force [ISAF], 2012). Clearly, a large number of service men and women have been impacted by the lengthy conflicts in the Middle East; however, a large fraction of the civilian population is also influenced. Since the mid 1970s, the US military has been an all-volunteer force (Albano, 1994; Rostker, 2006), and with 61% of those serving in the active duty military married (Maxfield, 2011), over one million spouses have experienced at least one deployment during the last 10 years.

The stressors that military spouses face are unmatched in the civilian world and include frequent relocations, lengthy deployments followed by abrupt reunions, and normative constraints instilled by the military (Drummet, Coleman, & Cable, 2003; Segal, 1986). Of these unique stressors, military spouses cite deployment as their major dissatisfaction with military life (Dandeker, French, Birtles, & Wessely, 2006; Defense Manpower Data Center, 1985). Current conflicts in the Middle East have resulted in American service members facing frequent and lengthy combat deployments. Although most service members appreciate the opportunity to deploy and use their training in

meaningful, real-world combat operations (Hosek, Kavanagh, & Miller, 2006), spouses of deployed service members not only fear for their loved one's safety, but also struggle with disruption of routine, becoming the sole-decision maker, coping as a single parent, loneliness, and isolation (Black, 1993; Figley, 1993; Tollefson, 2008).

While combat deployments eventually come to an end, war continues to impact the service members who fought in them and their families. The stressors that families experience during the reunion period are found to be just as stressful as those experienced during the actual deployment (Segal, 1986) and include resentment for missing important events (Drummet et al., 2003; Segal, 1986), shifts in family roles (Black, 1993; Drummet et al., 2003), pressure to return to normalcy (Figley, 1993; Solomon, 1988), and residual effects of war, including physical or psychological injuries, such as posttraumatic stress disorder (PTSD; Figley, 1993; Segal, 1986; Drummet et al., 2003). As a result, 19% of military families experience severe adjustment issues following deployment (Figley, 1993).

The relationship between stress and mental health is well documented (e.g., Kendler, Karkowski, & Prescott, 1999; Kessler, 1997), and poor adaptation to the military lifestyle may contribute to the decreased well-being in military spouses. Depression, among other psychopathologies, has been shown to disproportionately impact the spouses of those serving in the military, with military spouses reporting a prevalence rate of 19% (Mansfield et al., 2010), which is over three times that of their civilian peers (Kessler, Chiu, Demler, & Walters, 2005). This discrepancy is even greater when service members are deployed, as wives are 1.24 times more likely to be depressed

while their husbands are deployed relative to when their husbands are home; further, nearly 25% of wives are diagnosed with depressive disorder during the deployment of their husbands (Mansfield et al., 2010).

The ability to cope with the demands of deployment and subsequent reunions is also important for the health of the US Armed Forces, as spouses who cope successfully with military life are more supportive of their service member's career (Pittman, Kerpelman, & McFadyen, 2004), and as a result, these service members become more committed to the military (Bourg & Segal, 1999). Conversely, service members with dissatisfied spouses have higher attrition rates relative to those satisfied with military life (Drummet et al., 2003).

Individuals are affected by stress in complex ways, and when exposed to a stressor, some individuals will react differently than others (DeLongis, Folkman, & Lazarus, 1988). For example, some military spouses experience anger, depression, and loneliness when faced with deployment, while others feel empowered and a sense of independence (Wood, Scarville, & Gravino, 1995). The reason for such diverse responses to the deployment cycle is due to the multidimensional relationship between stress and adaptation. That is, stressors do not act directly on an individual; rather, it is one's appraisal of the event, mediated by internal and external factors, that determines whether a favorable or unfavorable outcome will result (Lazarus & Folkman, 1984; Boss, 1986).

Recent developments in the field of positive psychology suggest that positive emotions have significant adaptive value, as higher levels of positive emotions have been

shown to foster adaptation to adversity (Rioli, Savicki, & Spain, 2010), promote health and well-being (Danner, Snowdon, & Friesen, 2001; Keyes, 2002), and serve as a protective factor against stress (Folkman, 1997). Fredrickson (1998; 2001) has conceptualized the way in which positive emotions play an active role in enhancing physical and psychological well-being in her broaden-and-build theory of positive emotions.

According to this theory, positive and negative emotions have distinct yet complementary functions (Fredrickson, 1998; 2001). The adaptive value of negative emotions (e.g., anger, fear) lies in their ability to narrow an individual's thought-action repertoire in order to quickly and decisively react to an adverse situation in a particular manner (e.g., escape when afraid; Fredrickson, Mancuso, Branigan, & Tugade, 2000). Negative emotions are viewed as having an evolutionary advantage, as they aid survival during immediate life-threatening situations. Conversely, positive emotions (e.g., contentment, joy) elicit a variety of enduring benefits, including the production of pleasant sensations and increases in cognition and social connectedness. The theory's broaden hypothesis suggests that these positive experiences broaden one's thought-action repertoire, thereby expanding an individual's cognitive processes, widening the potential responses that come to mind, and ultimately resulting in more thoughtful decision-making and improved adaptation to adversity. In turn, the build hypothesis posits that this broadened cognition builds personal resources, including emotional, intellectual, and social resources, which enhance one's adaptation to stressful conditions and overall well-being (Fredrickson, 2004). Further, positive emotions are also thought to have an

undoing effect on negative emotions, whereby the broadened cognition that positive emotions elicit liberates individuals from the lingering narrowed mindset due to negative emotions (Fredrickson, 2000).

Empirical evidence supports the adaptive function of positive emotions, as studies have found that anxious individuals recover more quickly following exposure to activities that evoke positive emotions (Fredrickson et al., 2000; Nelson & Knight, 2010). In addition, positive emotions have been shown to increase one's likelihood of bouncing back after a stressful experience (Fredrickson, 2004), accelerate the time needed to recover (Fredrickson & Levenson, 1998; Tugade & Fredrickson, 2004), and serve as a resource for people coping with adversity (Folkman & Moskowitz, 2000). Positive emotions have displayed the ability to directly impact physical health (Fredrickson & Levenson, 1998), psychological functioning (Nelson & Knight, 2010), and emotional well-being (Keyes, 2002), as well as moderate the effect of stress on depression (Davis, Nolen-Hoeksema, & Larson, 1998).

PURPOSE

The purpose of this dissertation was three-fold: (a) to perform a meta-analytic review to determine the effect of deployment on the psychological well-being of military spouses; (b) to identify whether positivity can serve as a protective factor against the stressfulness of deployment; and (c) to examine the ability of positive emotions to increase personal resources and psychological well-being. Markers of emotional states (positive and negative emotions), personal resources (adaptive coping, maladaptive

coping, and resilience), and well-being (depressive and physical symptoms) were measured. In addition, demographic (e.g., age, ethnicity, and education) and deployment (e.g., length and location of deployment) variables were measured in order to control for the possible effect they may have on the relationships of interest. In summary, this dissertation is comprised of three studies that together attempt to answer questions regarding the effect of the deployment cycle on military spouses, potential protective factors, and the utility of the broaden-and-build theory of positive emotions in this population.

HYPOTHESES

Study 1

Study 1 consisted of a meta-analytic review of the existing literature to determine the effect of deployment on the psychological well-being of military spouses. Moderator analyses were performed in order to determine whether the effect of deployment on the psychological well-being of spouses differed by sample (age), deployment (branch, conflict, length of separation) and study (control type) characteristics. In order to test the effect of deployment on psychological outcomes, the following hypotheses were tested:

Hypothesis 1.1.

Having a spouse deployed exerts a positive effect on psychological problems, such that those who have a spouse deployed exhibit higher levels of psychological problems than those without a spouse deployed.

Hypothesis 1.2

The heterogeneity among studies is significantly greater than to be expected by sampling error alone.

Hypothesis 1.3

The effect sizes will vary by sample (e.g., age), deployment (e.g., branch, conflict, and length of deployment), and study characteristics (e.g., control type), such that:

Hypothesis 1.3a: The effect of deployment on psychological problems will be greater in younger samples.

Hypothesis 1.3b: The effect of deployment on psychological problems will be greater in spouses of service members in the Army and Marines than in the Navy.

Hypothesis 1.3c: The effect of deployment on psychological problems will be greater in spouses of service members deployed in support of OEF and OIF than in previous conflicts.

Hypothesis 1.3d: The effect of deployment on psychological problems will be greater in spouses of service members who have been deployed for a longer period of time.

Hypothesis 1.3e: The effect of deployment on psychological problems will not depend on the type of control group used.

Study 2

Study 2 used the broaden-and-build theory of positive emotions as a framework in order to determine the ability of positivity to protect military spouses against the

heightened levels of depression associated with deployment. Based on the undoing hypothesis, the following hypotheses were tested:

Hypothesis 2.1.

Perceived stress will have a positive association with depressive symptoms.

Hypothesis 2.2.

Positivity will have a negative association with depressive symptoms.

Hypothesis 2.3.

Positivity will moderate the association between perceived stress and depressive symptoms, such that high levels of positivity will ameliorate the influence of stress on depressive symptoms (see Figure 1.1).

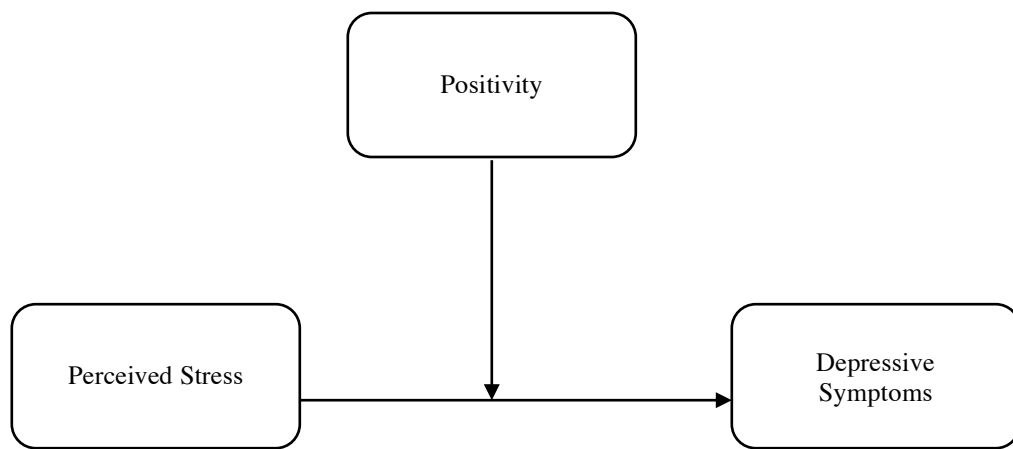


Figure 1.1: Hypothesized relationships among perceived stress, positivity, and depressive symptoms in military spouses during deployment.

Study 3

Study 3 adopted a prospective design in order to determine whether positive emotions had the ability to build personal resources (adaptive coping, maladaptive coping, and resilience) and enhance psychological (Hypotheses 3.1 – 3.3) and physical (Hypotheses 3.4 – 3.6) well-being in military spouses following the reunion with their deployed service member. Based on the build hypothesis of the broaden-and-build theory, the following hypotheses were tested:

Hypothesis 3.1.

Positive emotions during deployment will have a positive effect on adaptive coping and resilience and a negative effect on maladaptive coping and depressive symptoms.

Hypothesis 3.2.

Adaptive coping and resilience will have a negative effect on depressive symptoms, while maladaptive coping will have a positive effect on depressive symptoms.

Hypothesis 3.3.

Each personal resource will mediate the relationship between positive emotions and depressive symptoms (see Figure 1.2).

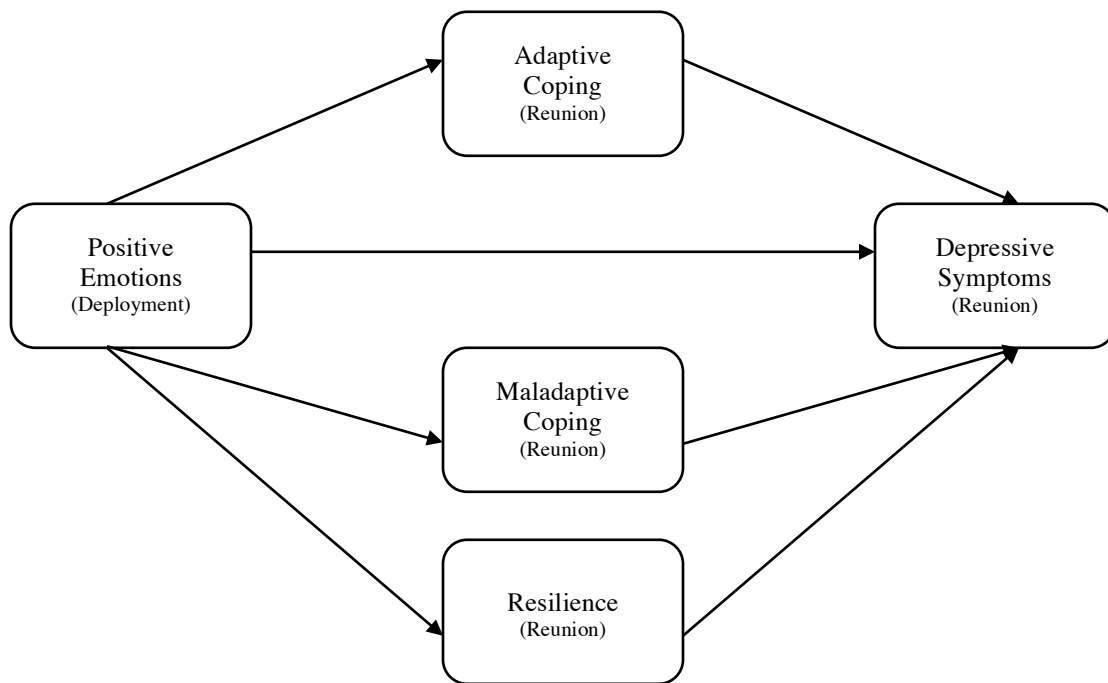


Figure 1.2: Hypothesized relationships among positive emotions, personal resources, and depressive symptoms in military spouses.

Hypothesis 3.4.

Positive emotions during deployment will have a positive effect on adaptive coping and resilience and a negative effect on maladaptive coping and physical symptoms.

Hypothesis 3.5.

Adaptive coping and resilience will have a negative effect on physical symptoms, while maladaptive coping will have a positive effect on physical symptoms.

Hypothesis 3.6.

Each personal resource will mediate the relationship between positive emotions and physical symptoms (see Figure 1.3).¹

¹ Hypotheses 3.4 – 3.6, represented by the hypothesized model in Figure 1.3, were indeed tested as part of this dissertation; however, the reported physical symptoms in the sample utilized were minimal (9.44 ± 9.51) compared to those measured using previous military wife samples (23.54 ± 20.83 ; Dimiceli, Steinhardt, & Smith, 2010). This low level of physical symptoms could be due to the young age of the sample used in this dissertation, resulting in fewer physical symptoms. Consequently, only the model hypothesized in Figure 1.2 will be discussed in depth in Chapter Three of this dissertation. Results for the model in Figure 1.3 can be found in Appendix I.

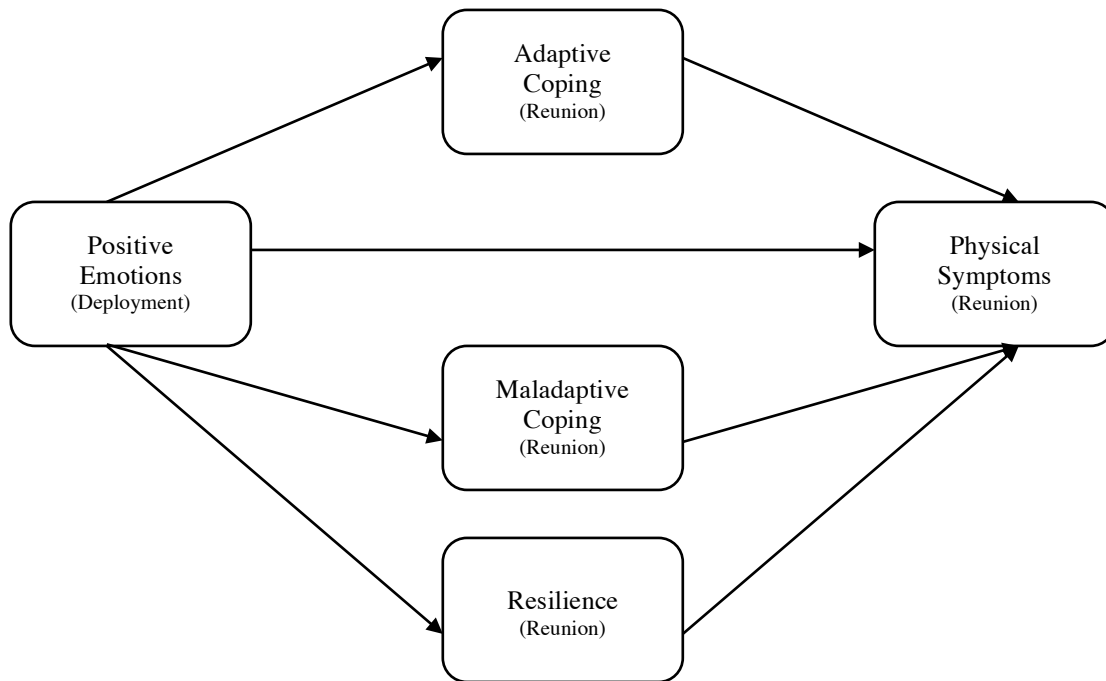


Figure 1.3: Hypothesized relationships among positive emotions, personal resources, and physical symptoms in military spouses.

DEFINITION OF TERMS

Coping Strategies

Coping strategies are the specific cognitive or behavioral strategies used in an effort to prevent or diminish threat, harm, or loss, while reducing the associated emotional distress (Carver & Connor-Smith, 2010; Lazarus & Folkman, 1984). Coping strategies have a specific purpose, such as venting emotions or seeking emotional social support, and their effectiveness varies depending on the context of the stressful situation facing an individual (Lazarus & Folkman, 1984).

Coping Strategies – Adaptive

Within the context of coping research, adaptive refers to “the effectiveness of coping in improving the adaptational outcome” (Lazarus, 1993, p. 237). Whether or not a particular coping strategy is adaptive depends on personal and situational factors, though there is general consensus on strategies that are adaptive (Carver, Scheier, & Weintraub, 1989; Zeidner & Saklofske, 1996). Adaptive coping strategies in this study include acceptance, active coping, emotional support, instrumental support, planning, and positive reframing.

Coping Strategies – Maladaptive

While adaptive coping strategies lead to improved outcomes (Lazarus, 1993), maladaptive coping strategies lead to more negative outcomes, such as anxiety, depression, and poor physical health (Moskowitz, Hult, Bussolari, & Acree, 2009;

Roesch et al., 2005). Maladaptive coping strategies in this study include behavioral disengagement, denial, self-blame, self-distraction, substance use, and venting of emotions.

Depressive Symptoms

Depressive symptoms reflect the degree to which an individual is experiencing symptomatology generally associated with depression, with an emphasis on affect. The symptoms include depressed mood, feelings of guilt, worthlessness, helplessness, and restless sleep (Radloff, 1977).

DSM-IV

The *Diagnostic and Statistical Manual of Mental Disorders, 4th edition* (DSM-IV) is a manual published by the American Psychiatric Association (APA). It discusses all mental health disorders for both adults and children and includes information about etiologies, diagnostic criteria, rates, prognosis, and optimal treatment approaches (APA, 1994).

Effect Size

Effect sizes represent the size and direction of the difference between two groups' means on an outcome of interest. Cohen defines effect sizes as “the degree to which the phenomenon is present in the population” or “the degree to which the null hypothesis is false” (Cohen, 1988, p. 9-10). When a null hypothesis is found to be statistically improbable, or false, it is false to a specific degree – the effect size. The larger this effect

size is, the more the phenomenon is manifested in the population. Common effect sizes include standardized mean differences (e.g., Cohen's d), odds ratio, relative risk, and Pearson's r correlation (Cooper, 2010).

Family Readiness Group

Family Readiness Groups (FRG) are command-sponsored organizations that aim to maintain clear communication channels between the unit and families, increase the resiliency and readiness of service members and their families, and to provide tools to facilitate adjustment to the military lifestyle (Department of the Army, 2010).

Mediation

Mediation occurs when the mechanism that brings about the observed relationship between an independent variable and a dependent variable is via the inclusion of a third variable, known as a mediator. Rather than a direct causal relationship between the independent and dependent variables, the independent variable causes the mediator variable, which in turn causes the dependent variable (Baron & Kenny, 1986).

Moderation

Moderation occurs when the relationship between two variables is dependent on a third variable, which is referred to as a moderator. The effect of a moderator is identified statistically by an interaction, where the direction and/or strength of the relationship between the independent and dependent variables is affected by the moderator (Baron & Kenny, 1986).

Negativity Bias

Negativity bias is a psychological phenomenon known as the notion that “bad is stronger than good.” It implies that humans give more weight to negative experiences, rather than positive ones. Consequently, this bias suggests that individuals must experience a greater number of positive emotions to overcome or undo the toxicity of negative emotions (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001; Rozin & Royzman, 2001). This phenomenon is asymmetric to the positivity offset.

Operation Enduring Freedom (OEF)

Operation Enduring Freedom (OEF) is the official name of the occupation of Afghanistan by the US military as part of the Global War on Terror. The conflict began in October 2001, and 68,000 American service members remain in support of the military efforts in Afghanistan (ISAF, 2012).

Operation Iraqi Freedom (OIF)

Operation Iraqi Freedom (OIF) is the official name of the occupation of Iraq by the US military as part of the Global War on Terror. The conflict began in March 2003, and the final US service members exited Iraq in December 2011.

Perceived Stress

Perceived stress is a measure of the degree to which situations in an individual's life are appraised as stressful, including how overloaded, uncontrollable, and unpredictable the participants find their lives (Cohen, Kamarck, & Mermelstein, 1983).

Physical Symptoms

Physical symptoms indicate the extent to which common indicators of illness have been experienced. Symptoms include those that are physical (e.g., cold or cough) and psychosomatic (i.e., headache) in nature, but excludes those that are psychological (e.g., feeling depressed; Cohen & Hoberman, 1983).

Positive Emotions

Positive emotions are fleeting reactions to current circumstances that serve as markers for and promote flourishing or optimal well-being. Common positive emotions include contentment, interest, joy, and love (Fredrickson, 2001).

Positivity

Positivity is defined as the ratio of experienced positive emotions to experienced negative emotions (Fredrickson & Losada, 2005). A ratio of 2.9-to-1 is said to be reflective of a flourishing life, while a ratio below 2.9-to-1 is indicative of languishing, or individuals who are lacking fulfillment (Fredrickson, 2008). A ratio below 1-to-1 is suggestive of a psychopathology, such as clinical depression (Fredrickson, 2009; Schwartz et al., 2002).

Positivity Offset

Positivity offset is a psychological phenomenon consisting of two parts: (a) most people feel mildly good most of the time; and (b) people tend to interpret neutral situations as mildly positive (Cacioppo, Gardner, & Berntson, 1999). This phenomenon

is asymmetric to the negativity bias.

Protective Factor

Protective factors refer to a “measurable characteristic in a group of individuals or their situation that predicts positive outcomes in the context or risk of adversity” (Masten & Reed, 2002, p. 83). A protective factor is statistically represented as an interaction term, by which it buffers the individual against the negative outcome. In the event that a protective factor serves a significant function, it is referred to as moderation (Baron & Kenny, 1986).

Resilience

Resilience generally refers to “patterns of positive adaptation during or following significant adversity or risk” (Masten, Cutuli, Herbers, & Reed, 2009, p. 118). Characteristics that are indicative of a resilient individual include faith, goal setting, humor, patience, and tolerance of negative affect, as well as the ability to make commitments and take control of challenges (Connor & Davidson, 2003).

SurveyMonkey

SurveyMonkey is a privately run company that allows users to create web-based surveys. SurveyMonkey was used to collect self-report data from military spouses at two time points in this dissertation.

vFRG

vFRG is a password-protected website (<http://www.armyfrg.org>) that provides up-to-date information, interactive tools, and virtual communities for service members and their families. The vFRG website was used to recruit participants for this dissertation.

Chapter Two: Review of Literature

DEMANDS OF THE MILITARY LIFESTYLE

Families, whether military or otherwise, face a number of normative stressors, such as job-related tasks, household duties, finances, and child rearing (Black, 1993; Dimiceli, Steinhardt, & Smith, 2010; Drummet et al., 2003); however, military families face additional stressors, making the military lifestyle uniquely stressful. These stressors include: long, unpredictable hours (Albano, 1994; Paulus, Nagar, Larey, & Camacho, 1996), limited income (Black, 1993; Paulus et al., 1996), frequent relocations, with the average family moving every two to three years, or eight times in a 20 year career (Finkel, Kelley, & Ashby, 2003; Segal, 1986), lengthy separations followed by abrupt reunions (Segal, 1986), and normative constraints instilled by the military, such as rank privilege and the expectation to join social clubs (Black, 1993; Drummet et al., 2003; Segal, 1986). Of these unique stressors, military spouses cite separations as their major dissatisfaction with military life (Dandeker et al., 2006; Defense Manpower Data Center, 1985), and one study found 85% of military spouses listed deployment as the most stressful situation experienced in the past five years (Dimiceli et al., 2010).

Separation

Military separations occur frequently for schooling, field training, peacekeeping missions, or combat deployment. All separations require some adjustments by the spouses as they are faced with a disruption in routine (Figley, 1993). This disruption involves being transformed into a single parent (Black, 1993; Segal, 1986; Tollefson,

2008; Wheeler & Torres Stone, 2010; Wood et al., 1995) and sole-decision maker (Black, 1993; Tollefson, 2008), experiencing loneliness (Black, 1993; Segal, 1986; Warner, Appenzeller, Warner, & Grieger, 2009; Wood et al., 1995), social isolation (Black, 1993), and psychosomatic ailments (Segal, 1986; Wood et al., 1995), facing limited contact with spouse (Segal, 1986; Tollefson, 2008) while trying to maintain a relationship (Drummet et al., 2003), pressure to return to normalcy (Figley, 1993; Solomon, 1988), financial difficulties (Black, 1993), and a potential lack of knowledge concerning home and auto repairs (Tollefson, 2008; Wood et al., 1995). In addition to these challenges associated with all separations, those due to combat deployment present additional sources of stress. The risk of injury or death of the deployed service member leads to extraordinary concern for the service member's safety felt by the spouse (Albano, 1994; Figley, 1993; Segal, 1986; Tollefson, 2008; Warner et al., 2009). Further, technological advancements have allowed for ample media coverage of the conflicts in the Middle East (Drummet et al., 2003; Figley, 1986; Tollefson, 2008). This coverage often leads to rumors and misinformation among military spouses (Figley, 1993), and general information from the media coupled with limited direct contact with the deployed service member leads to an erratic oscillation between hope and despair (Solomon, 1988).

The impact on families due to the stressors associated with these lengthy and recurring separations is enormous, and SteelFisher and colleagues (2008) have reported widespread problems in spouses of service members deployed in support of OEF and OIF. In military wives, the number of depressive symptoms and use of mental health services increases during separations (Eaton et al., 2008), with wives being 1.24 times

more likely to be depressed during a separation relative to when their spouse is home (Mansfield et al., 2010). In one sample of military wives whose husbands were currently deployed, 44% met the cutoff for exhibiting a moderately severe level of depressive symptoms (Dimiceli et al., 2010), while another study found 20% of spouses met the DSM-IV criteria for major depression and/or generalized anxiety disorders (Eaton et al., 2008).

Homecoming and Reunion

As Modell and Haggerty (1991) point out, “the warrior’s image, his wounds, and the world he comes home to are a story that has been retold in Western culture at least from the time of Homer” (p. 205). While combat deployments eventually come to an end, war continues to impact the service members who fought in them and their families. Returning service members are moved from the front lines to their front porch in a matter of days, and this rapid reentry is the primary reason that 75% of military spouses indicate the period immediately following homecoming is more stressful than the deployment itself (National Military Family Association, 2005; Pincus, House, Christenson, & Adler, 2001). In fact, 19% of military families experience severe adjustment issues following the return of their loved one (Figley, 1993), which is attributed to feelings of ambivalence as roles and relationships are reestablished.

The stressors that families experience during the reunion period are found to be just as stressful as those experienced during the actual deployment (Segal, 1986) and include resentment for missing important events (Drummet et al., 2003; Segal, 1986),

criticism of contact during the separation (Figley, 1993), shifts in family roles (Black, 1993; Drummet et al., 2003; Figley, 1993; Solomon, 1988), differing opinions on parenting (Black, 1993; Drummet et al., 2003; Figley, 1993), pressure to return to normalcy (Figley, 1993; Solomon, 1988), withdrawal from support that was beneficial during separation (Drummet et al., 2003), and residual effects of war, including physical injuries or psychopathologies (Drummet et al., 2003; Figley, 1993; Segal, 1986; Tollefson, 2008). The stressfulness of this period is even more exaggerated when the deployed service member returns with a psychopathology, as more than 20% do (Marmar, 2009). The spouses of an individual who returns with a psychopathology, of which PTSD and depression are the most common, become even more vulnerable to the effects of war (Figley, 1993; Peebles-Kleiger & Kleiger, 1994). Some even experience secondary traumatization, which involves the transmission of sequelae to family members, including anxiety, paranoia, hostility, and constrained affect (Dirkzwager, Bramsen, Ader, & van der Ploeg, 2005; Solomon et al., 1992).

THE IMPORTANCE OF SUCCESSFUL ADAPTATION

The inability to successfully manage the demands of military life may be a potential mechanism by which psychopathologies are developed in military families, as the association between stressful life events and the onset of mental disorders is well documented (Kessler, 1997; Kendler et al., 1999); however, not only is the successful adaptation vital for the psychological health of those in military families, it is also necessary to maintain a high level of functioning in the military unit. In fact, the military

often adopts the motto “we recruit Soldiers, but retain families” (Ingraham, 2002, p. 1). Spouses who perceive military life as stressful display reduced psychological well-being (Rosen, Westhuis, & Teitelbaum, 1994), and Soldiers with dissatisfied spouses have higher attrition rates relative to those whose wives are satisfied with military life (Drummet et al., 2003). Conversely, spouses who cope well with the demands of military life are more supportive of their Soldiers’ careers (Pittman et al., 2004), and as a result, these Soldiers become more committed to the military (Bourg & Segal, 1999). Therefore, the spouses’ ability to adapt to the emotional stressors of military life plays a critical role in Soldier readiness as well as the retention of an experienced military force.

A MULTIDIMENSIONAL MODEL OF STRESS AND COPING

Although nearly every military family will experience a military-induced separation and subsequent reunion, not all military spouses respond in the same way. Individuals are affected by stress in complex ways, and when exposed to a stressor, some individuals will react differently than others (DeLongis et al., 1988; Figley, 1993). While some spouses find themselves feeling lonely, angry, and depressed while their spouse is deployed, others feel a sense of independence and empowerment (Rossetto, 2009; Wood et al., 1995). The stressor (e.g., deployment or reunion) does not act directly on the military spouse; rather, it is the spouse’s perception of the event, mediated by internal and external factors, that determines whether the spouse will successfully cope or fall into a crisis (Boss, 1986).

The transtheoretical model of stress and coping (Lazarus & Folkman, 1984;

Folkman & Moskowitz, 2000) is a framework that describes the process of coping with stressful situations (see Figure 2.1). The model suggests that stressful experiences are transactions between an individual and their environment, in which the impact of a stressor is mediated by the individual's appraisal of the stressor and the psychosocial resources at his or her disposal (Lazarus & Cohen, 1977; Lazarus & Folkman, 1984). When initially faced with a stressor, individuals evaluate the significance of the stressor (primary appraisal), including perceptions of severity of and susceptibility to the threat (Glanz & Schwartz, 2008). Whereas primary appraisal focuses on the characteristics of a stressor, secondary appraisal is an assessment of the individual's coping resources (Cohen, 1984; Lazarus & Folkman, 1984). That is, secondary appraisal involves the perceptions of one's ability to change the situation, the efficacy of one's coping resources, and the ability to manage one's emotions (Glanz & Schwartz, 2008; Lazarus & Folkman, 1984). Together, these two forms of appraisal determine to what extent the stressor is appraised as a challenge, harm, or threat.

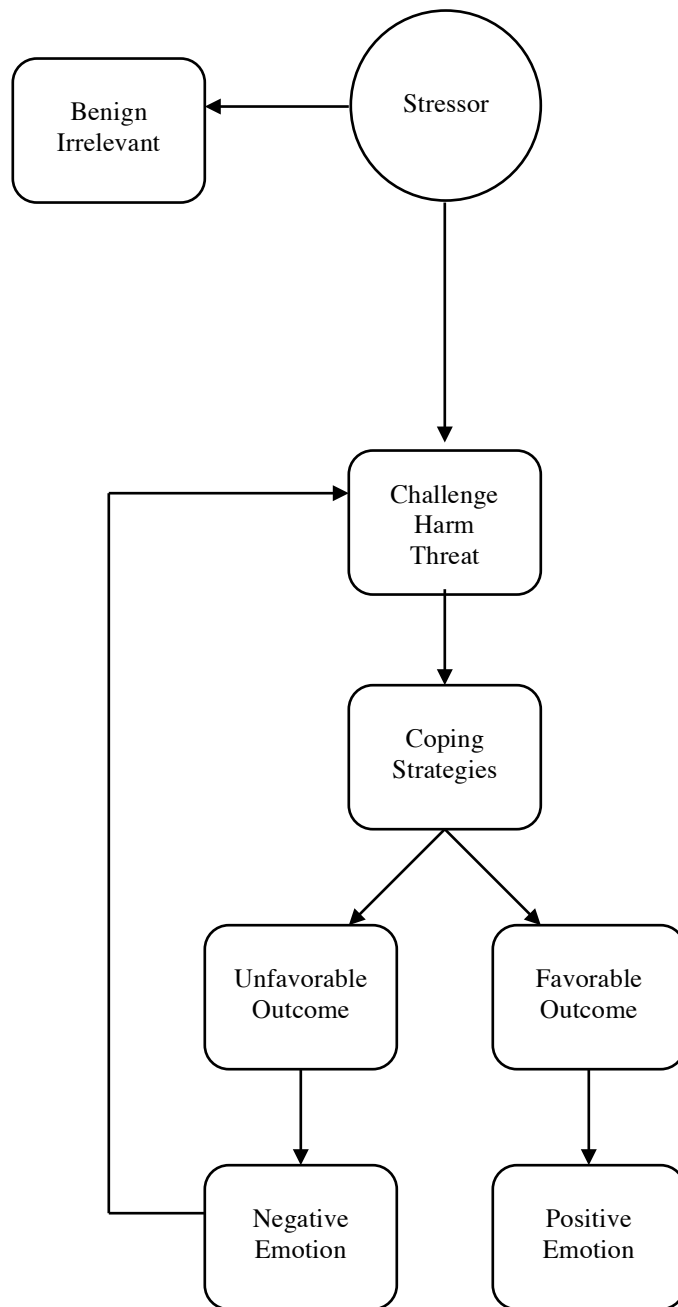


Figure 2.1: Original transtheoretical model of stress and coping (Lazarus & Folkman, 1984).

Coping Strategies

According to the transtheoretical model, the effects of the primary and secondary appraisals are mediated by actual coping efforts (Lazarus & Folkman, 1984). Coping involves the use of cognitive and behavioral strategies in an effort to prevent or diminish threat, harm, or loss, while reducing the associated emotional distress (Carver & Connor-Smith, 2010; Lazarus & Folkman, 1984). Coping strategies can be either adaptive or maladaptive, where adaptive refers to “the effectiveness of coping in improving the adaptational outcome” (Lazarus, 1993, p. 237). Factor analytic studies suggest that strategies such as active coping, planning, positive reframing, and seeking social support are adaptive in managing stress. Conversely, coping strategies such as behavioral disengagement, denial, substance use, and venting of emotions are maladaptive (Carver et al., 1989). Whether an individual predominately utilizes adaptive or maladaptive coping strategies has been repeatedly linked to overall well-being (Lazarus & Folkman, 1984). For example, meta-analyses indicate that adaptive coping is related to more favorable outcomes, such as improved physical and psychological health (Duangdao & Roesch, 2008; Moskowitz et al., 2009; Roesch et al., 2005), while increased use of maladaptive coping leads to more unfavorable outcomes, such as anxiety, depression, and poor physical health (Moskowitz et al., 2009; Roesch et al., 2005).

Use of adaptive coping strategies has been linked to improved well-being, while maladaptive coping strategies during deployment have been linked to poor physical and psychological well-being in military spouses (Dimiceli et al., 2010; Padden, Connors, & Agazio, 2011). Adaptive coping strategies frequently adopted by military spouses

include acceptance, planning (Dimiceli et al., 2010), positive reframing (Figley, 1993), problem solving (Hobfoll et al., 1991), seeking social support (Figley, 1993; Hobfoll et al., 1991; Wheeler & Torres Stone, 2010), and maintaining a healthy lifestyle through diet and exercise (Figley, 1993). On the other hand, spouses also engage in a considerable number of maladaptive coping strategies, including avoidance (Figley, 1993; Hobfoll et al., 1991; Wheeler & Torres Stone, 2010), behavioral disengagement (Wheeler & Torres Stone, 2010), blaming self and others (Hobfoll et al., 1991), denial (Figley, 1993), substance use (Figley, 1993; Hobfoll et al., 1991), and venting (Dimiceli et al., 2010). The emotional and social accommodations made by spouses during deployments not only impact their adaptation during the separation but also following the reunion (McCubbin, Dahl, Lester, Benson, & Robertson, 1976), as the coping strategies spouses used during deployment predict the coping strategies adopted following reunion (Pittman et al., 2004).

Individual and Environmental Determinants of Coping

In addition to the mediating processes of appraisal and coping strategies, the transtheoretical model suggests behavioral, psychological, and social characteristics are influential throughout the coping process (Folkman & Moskowitz, 2000; Lazarus & Folkman, 1984). In fact, a number of individual and environmental determinants have been found to influence the military spouse's ability to successfully adapt during deployment. Military spouses who have been married to the military longer report reduced emotional stress and use more adaptive coping strategies (McCubbin et al., 1976;

Padden et al., 2011; Rosen et al., 1994; Spera, 2009). Being married to a higher rank has also been shown to reduce stress and improve family adjustment during deployment (McCubbin et al., 1976; Padden et al., 2011; Rohall et al., 1999; Rosen et al., 1994; Westhuis, Fafara, & Oullette, 2006); conversely, one-third of junior enlisted service members believe their spouse would have a serious problem coping with deployment (Spera, 2009). It has been suggested that differences in the adaptation capacity due to higher rank may be due to higher socioeconomic status (Peebles-Kleiger & Kleiger, 1994; Rohall, Segal, & Segal, 1999; Westhuis et al., 2006) and improved social support (Bowen, Mancini, Martin, Ware, & Nelson, 2003; Copeland & Norell, 2002; Rohall et al., 1999; Rosen, Moghadam, & Carpenter, 1989) experienced by higher-ranking spouses. Other factors that lead to more adaptive behaviors include maintaining employment (McCubbin et al., 1976; Peebles-Kleiger & Kleiger, 1994; Rosen et al., 1989; Westhuis et al., 2006), high marital satisfaction (McCubbin et al., 1976; Peebles-Kleiger & Kleiger, 1994), having children (McCubbin et al., 1976; Peebles-Kleiger & Kleiger, 1994; Westhuis et al., 2006), living on a military installation (Bowen et al., 2003; Rosen et al., 1989), and use of and satisfaction with military-sponsored services (Pittman et al., 2004). Conversely, younger age (Martin & Ickovics, 1987; Rohall et al., 1999) and lower level of education (Archer & Cauthorne, 1986; McCubbin et al., 1976; Rosen et al., 1989) are risk factors for poor adaptation.

Previous deployment experience has also been linked to positive adaptation (Padden et al., 2011), although others suggest it is the appraisal of the separation – not the number of separations – that determines how a spouse is affected (Burrell, Adams,

Durand, & Castro, 2006). Deployment factors that contribute to a spouse's ability to cope during separation include perceptions of reason for deployment (Blount, Curry, & Lubin, 1992), communication with spouse during deployment (Rohall et al., 1999), level of danger service member is exposed to (Rosen et al., 1994), and length of deployment (Orthner, 2002; Rosen et al., 1994). In a recent survey of Army families, spouses were asked whether they would have a serious/very serious problem coping for varying deployment lengths. When faced with a deployment of less than one month, only 2% felt they would have a serious/very serious problem coping; however, as the length of time increased, the percentage of spouses reporting difficulty coping increased. Thirty-percent reported a serious/very serious problem coping with a deployment of seven months to a year, and 53% reported difficulty if the deployment was over one year. If the deployment was of an undetermined length, 69% felt they would experience a serious/very serious problem coping (US Army Community and Family Support Center, 2006). Because these individual, environmental, and deployment characteristics are related to adaptation outcomes in military spouses, they will be controlled for in this dissertation.

The Role of Positive Emotions

The transtheoretical model (Lazarus & Folkman, 1984) suggests that situations appraised as stressful (i.e., those that present a challenge, harm, or threat) require coping to manage the problem and regulate emotions. These coping strategies lead to an outcome, which is either unfavorable or favorable. Unfavorable outcomes lead to feelings of negative emotions and require additional coping. On the other hand,

favorable outcomes result in a feeling of positive emotions and the conclusion of the coping process. Recent works by Folkman and colleagues (Folkman, 1997; 2008; Folkman & Moskowitz, 2000), however, suggest that positive emotions are not just an end result of the coping process; rather, positive emotions play an integral role. As such, the original model has been modified to include two additional pathways (see Figure 2.2). The first pathway leads from positive emotions back to coping. It is suggested that coping strategies that generate positive emotions (e.g., positive reframing) help reenergize and reengage an individual faced with chronic stressors, leading to a sustained coping effort (Folkman, 1997; 2008). The second pathway describes the ability of positive emotions to provide a momentary respite from the distress associated with stressful situations. These positive emotions not only provide a “breather,” but they also restore depleted personal psychosocial resources, such as adaptive coping strategies and resilience (Folkman, 1997; Lazarus, Kanner, & Folkman, 1980).

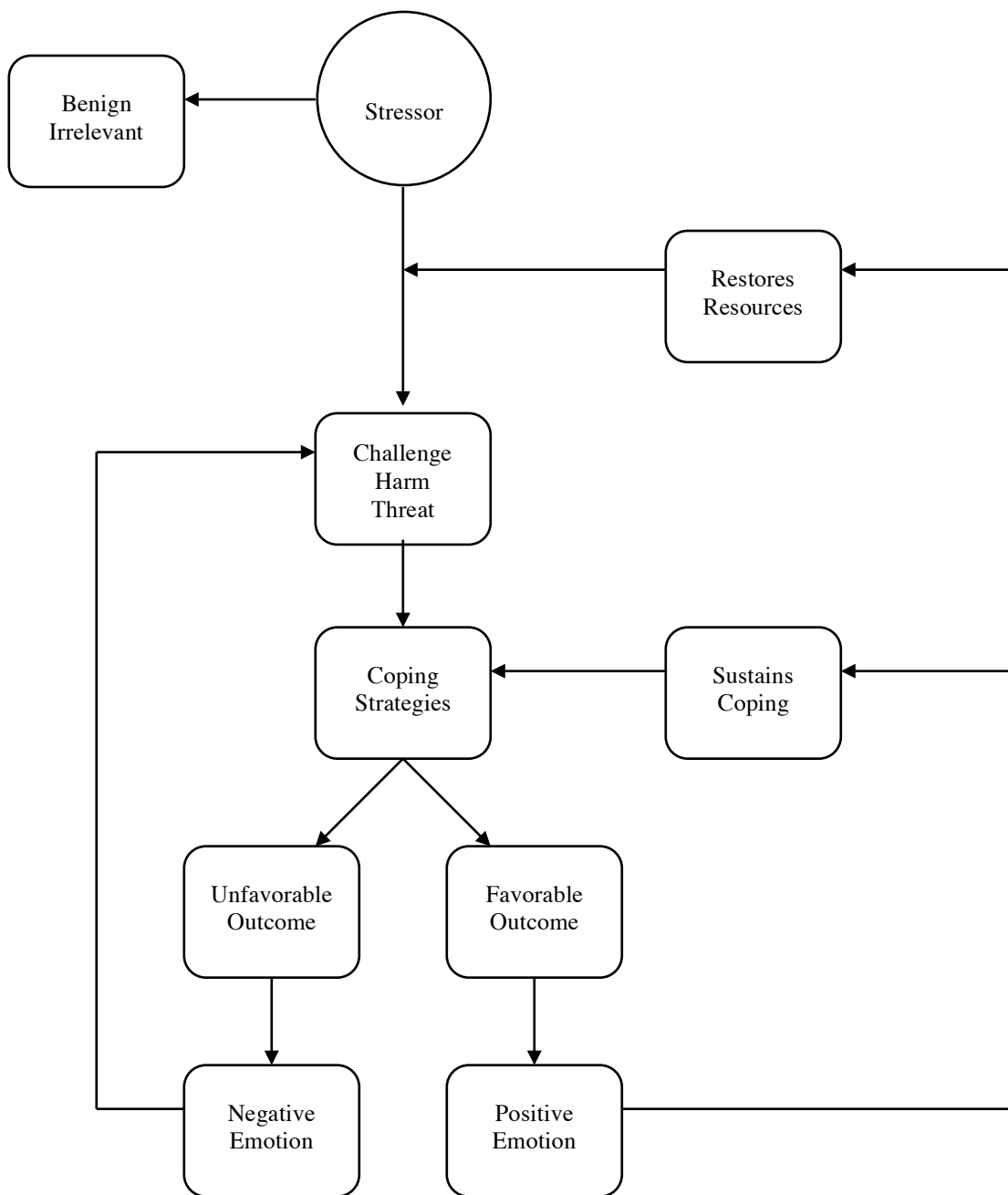


Figure 2.2: Revised transtheoretical model of stress and coping (Folkman, 2008).

Resilience

Though there is no universally accepted definition, researchers generally define resilience as “patterns of positive adaptation during or following significant adversity or risk” (Masten et al., 2002, p. 118). Often used interchangeably with the term *resilience* is the concept of hardiness, as both are functionally equivalent in the way that they operate (Kaplan, 1999). Individuals who are characterized as hardy, and thus resilient, tend to exhibit three characteristics that are adaptive in nature: (a) challenge (i.e., see stress as a normal part of life and an opportunity to learn and grow); (b) commitment (i.e., persevering through setbacks and obstacles); and (c) control (i.e., choose not to get overwhelmed but maintaining an influence; Kobasa, 1979; Maddi, 2002; 2006). As a result of these three characteristics, individuals are able to reinterpret stressors and achieve more favorable outcomes. In particular, resilience has been associated with reduced negative health outcomes, including depression (Bartone, 1999; Pietrzak, Johnson, Goldstein, Malley, & Southwick, 2009), PTSD (Bartone, 1999; Pietrzak et al., 2009), suicide attempts (Roy, Sarchiapone, & Carli, 2007), lower hemoglobin A1c (HbA1c) in diabetic patients (Yi, Vitaliano, Smith, Yi, & Weinger, 2008), and quicker cardiovascular recovery (Tugade, Fredrickson, & Barrett, 2004).

The transtheoretical model suggests that adaptive coping strategies and resilience play integral roles in the coping process and result in more favorable outcomes. These favorable outcomes, in turn, lead to feelings of positive emotions, which then produce sustained adaptive coping and restored resilience resources. The mechanism by which positive emotions leads to increased adaptive coping and resilience has been modeled by

Fredrickson (1998; 2001) in the broaden-and-build theory of positive emotions.

THE BROADEN-AND-BUILD THEORY OF POSITIVE EMOTIONS

The growing field of positive psychology has catalyzed the examination of positive emotions' ability to serve as a bulwark against stress. Historically, the field of psychology has focused on ameliorating psychopathology. Consequently, the majority of emotion research has concentrated on negative emotions (e.g., anger, fear), as negative emotions are more prominent causes of pathology, including anxiety disorders (Ohman, 1993), depression (Nolen-Hoeksema, Morrow, & Fredrickson, 1993), phobias (Ohman, 1993), and violence (Lemerise & Dodge, 1993). General theories of emotion, then, were constructed with negative emotions in mind, and key to many emotional theories is the idea that emotions are tied to specific-action tendencies (Frijda, 1986; Frijda, Kuipers, & Schure, 1989; Lazarus, 1991; Levenson, 1994; Oatley & Jenkins, 1996; Tooby & Cosmides, 1990). For example, fear leads to the urge to escape, while anger leads to the urge to attack. Along these lines, specific-action tendencies and physiological changes go hand-in hand. When an individual feels fear, the body increases blood flow to the large muscle groups of the legs in order to escape by running. Thus, the adaptive value of negative emotions lies in their ability to focus an individual's thought-action repertoire in order to quickly and decisively react to an adverse situation in a particular manner. Negative emotions, then, offer an evolutionary advantage, as they aid survival during immediate life-threatening situations (Cohn & Fredrickson, 2009; Fredrickson, 2000; 2004).

When these general emotion theories are applied to positive emotions (e.g., contentment, joy), it becomes clear that negative and positive emotions differ on both function and form. For example, joy is linked to aimless activity, contentment with inactivity, and interest in attending (Frijda, 1986); however, these responses are too varied to be called specific and do not hold the same adaptive benefit as negative emotion action-tendencies (Ekman, 1992; Fredrickson, 1998; Lazarus, 1991). It was the absence of a place for positive emotions in traditional emotion theory that led to the development of the broaden-and-build theory of positive emotions. Fredrickson's broaden-and-build theory of positive emotions recognizes that positive emotions do not occur as a result of life-threatening situations, resulting in a limited need for them to evoke specific-action tendencies. Rather, the theory posits that positive emotions *broaden* an individual's thought-action repertoires and *build* enduring personal resources (Fredrickson, 1998; 2001).

The Broaden Hypothesis

Negative emotions have long been believed to narrow the scope of individual's attention and cognition, and recent empirical evidence is supportive of this constricting effect (Schmitz, De Rosa, & Anderson, 2009; Talarico, LaBar, & Rubin, 2004). The broaden-and-build theory offers a corollary hypothesis and holds that positive emotions broaden individuals' through-action repertoires, allowing them to draw from a wider range of actions, ideas, and perceptions (Garland et al., 2010). This broadening hypothesis rests on a strong foundation of empirical evidence. For example,

experimentally-induced positive emotions broaden the field of visual attention, as evident by behavioral assessments (Fredrickson & Branigan, 2005; Rowe, Hirsh, & Anderson, 2007), brain imaging (Schmitz et al., 2009; Soto et al., 2009), and eye-tracking (Wadlinger & Isaacowitz, 2006). In addition, positive emotions expand individuals' repertoires of desired actions (Fredrickson & Branigan, 2005), their creativity (Rowe et al., 2007; Isen, Daubman, & Nowicki, 1987), flexibility (Isen & Daubman, 1984), integration (Isen, Rosenzweig, & Young, 1991), and openness to new experiences (Kahn & Isen, 1993) and information (Estrada, Isen, & Young, 1997; Raghunathan & Trope, 2002). Through this broadened mindset, individuals are likely to become more resilient – namely, they perceive challenge, become committed, and take control. Further, resilient individuals are characterized by high positive emotionality and take an optimistic approach to life and its challenges (Block & Kremen, 1996; Klohnen, 1996). Finally, positive emotions are correlated with more adaptive coping in a variety of samples, including college students (Fredrickson & Joiner, 2002), child abuse victims (Bonanno et al., 2002), and adults contemplating suicide (Joiner, Pettit, Perez, & Burns, 2001).

At the interpersonal level, positive emotions increase an individual's trust in acquaintances (Dunn & Schweitzer, 2005) and sense of oneness (Waugh & Fredrickson, 2006) and bonds (Cohn & Fredrickson, 2006; Gable, Reis, Impett, & Asher, 2004) with others. In addition, positive emotions have been shown to broaden social cognitions by breaking down the intergroup bias (Dovidio, Gaertner, Isen, Rust, & Guerra, 1995). This has also been shown in a racial context, as positive emotions have been shown to eliminate own-race bias in face-recognition and decrease perceived differences between

faces (Johnson & Fredrickson, 2005).

The Build Hypothesis

Despite being fleeting and subtle in nature, positive emotions have been found to contribute to important long-term life outcomes, including greater friendship development (Waugh & Fredrickson, 2006), higher incomes (Diener, Nickerson, Lucas, & Sandvik, 2002), increased marital satisfaction (Harker & Keltner, 2001), better physical health (Doyle, Gentile, & Cohen, 2006; Richman et al., 2005), and longer life expectancy (Danner et al., 2001; Moskowitz, 2003; Ostir, Markides, Black, & Goodwin, 2000). The broaden-and-build theory of positive emotions proposes that the broadened mind-sets experienced in the wake of positive emotions widen the actions, perceptions, and social connections that come to mind. In turn, these momentarily broadened outlooks allow people to discover and build enduring personal resources. These resources can be cognitive (e.g., enhanced mindfulness), physical (e.g., improved immune function), psychological (e.g., increased coping self-efficacy), or social (e.g., provision and receipt of emotional support). People with an ample supply of these resources at their disposal are more likely to successfully overcome life's challenges and take advantage of its opportunities. These pleasurable encounters and outcomes then result in increased feelings of positive emotions (Garland et al., 2010). This reciprocal relationship underlies the belief that positive emotions initiate an upward spiral. That is, the transient effects of positive emotions should accumulate over time: the broadened thinking triggered by previous positive emotions should facilitate adapting to adversity;

this improved coping should in turn create future positive emotional experiences. As this cycle continues, individuals build personal resources resulting in enhanced well-being and optimal functioning (see Figure 2.3; Fredrickson & Joiner, 2002; Garland et al., 2010).

The majority of empirical support for the build hypothesis comes from prospective correlational studies. For example, individuals who experience more positive emotions show increases over time in adaptive coping (Fredrickson & Joiner, 2002), resilience (Cohn, Fredrickson, Brown, Mikels, & Conway, 2009), optimism and tranquility (Fredrickson, Tugade, Waugh, & Larkin, 2003), mental health (Stein, Folkman, Trabasso, & Richards, 1997), autonomic flexibility (Kok & Fredrickson, 2010), and the quality of their close relationships (Gable, Gonzaga, & Strachman, 2006; Waugh & Fredrickson, 2006). However, more conclusive evidence from recent randomized controlled trials has emerged. Using an intervention designed to increase people's daily experience of positive emotions, namely loving-kindness meditation, Fredrickson and colleagues (2008) found that participants experienced an increase in nine distinct positive emotions (amusement, awe, contentment, gratitude, hope, interest, joy, love, and pride). These upward shifts in positive emotions produced increases in a wide range of personal resources, including improved mindfulness and social support. In turn, these personal resources predicted increased life satisfaction and reduced depressive symptoms (Fredrickson et al., 2008). The benefits of the loving-meditation kindness were still evident at a one-year follow-up (Cohn & Fredrickson, 2010).

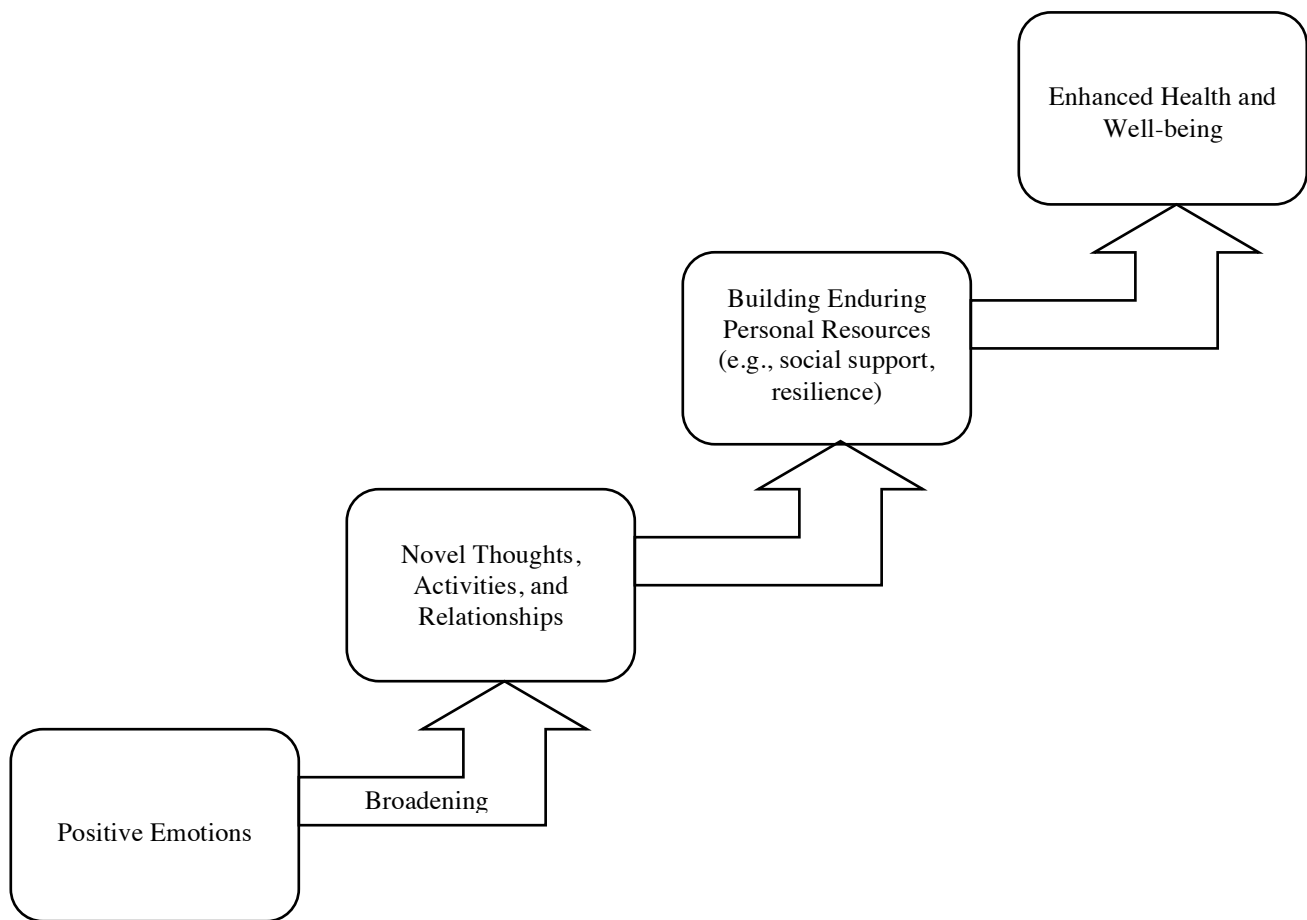


Figure 2.3: The broaden-and-build theory of positive emotions (Cohn & Fredrickson, 2010).

The Undoing Hypothesis

When individuals experience negative emotions, such as anger, anxiety, fear, and even sadness, the body's autonomic nervous system responds, resulting in increases in blood pressure, heart rate, and vasoconstriction (Fredrickson et al., 2000; Gross, Fredrickson, & Levenson, 1994; Levenson, Ekman, & Friesen, 1990; Ohman, 2000). This heightened cardiovascular reactivity – if excessive or chronic – places individuals at an increased risk for clinical and preclinical cardiovascular disease (Treiber et al., 2003; Manuck, 1994). Further, chronic emotion-driven cardiovascular reactivity damages arterial walls, initiates atherosclerosis, and impairs vascular responsiveness (Kaplan, Manuck, Williams, & Strawn, 1993).

Because positive emotions have a complementary function to negative emotions, in that they broaden individual's thought-action repertoires, they may also serve as an antidote for the narrowed mindset due to negative emotions. That is, positive emotions might *undo* the lingering effects of negative emotions (Fredrickson & Levenson, 1998; Levenson, 1988). In an effort to support the undoing hypothesis, Fredrickson and colleagues (2000) exposed participants who were experiencing stress-induced cardiovascular reactivity to a film that elicited one of four emotions: (a) contentment; (b) amusement; (c) neutrality; or (d) sadness. Films that elicited contentment or amusement led to faster cardiovascular recovery than the neutral or sad films. It has been proposed that the heightened cardiovascular reactivity following negative emotions is the body's way of physiologically preparing itself to perform a specific-action tendency (Levenson, 1994); thus, the ability of positive emotions to suppress this cardiovascular reaction

suggests that positive emotions are undoing the narrowed thought-action repertoire associated with negative emotions. Positive emotions may not only provide a physiological respite, but also restore physiological resources – in this case, cardiovascular homeostasis – that are exhausted during times of stress. Furthermore, the ability of contentment and amusement to undo the lingering effects of laboratory-induced negative emotions proposes the value of harnessing positive emotions in negative emotion regulation in daily life (Fredrickson, 2000).

The Positivity Ratio

Coupling the broaden-and-build theory with a systems approach to emotion, Fredrickson and Losada (2005) suggest that a person's well-being can be represented by their positivity ratio, or the ratio of experienced positive emotions to experienced negative emotions. Two psychological phenomena dictate that the ratio of positive to negative emotions must surpass 1-to-1 in order to promote optimal human functioning. First, positivity offset reflects that the general human experiences the world with mild positive affect (Cacioppo et al., 1999; Diener & Diener, 1996); in fact, normal functioning has been characterized as a ratio of about 2-to-1 (Fredrickson & Losada, 2005; Schwartz et al., 2002). Second, negativity bias, or the notion that “bad is stronger than good,” implies that more positive emotions are necessary to overcome, or undo, the toxicity of negative emotions (Baumeister et al., 2001; Rozin & Royzman, 2001). Consistent with these psychological asymmetries, a nonlinear dynamic mathematical model (Losada, 1999; Losada & Heaphy, 2004) indicates a ratio of 2.9-to-1 as the tipping

point at which human flourishing emerges. That is, individuals above a ratio of 2.9-to-1 experience the benefits of positive emotions at a level that is sufficient to promote generativity, growth, and resilience (Garland et al., 2010). Conversely, a positivity ratio below 2.9-to-1 is indicative of languishing, or individuals who are “stuck in a rut” and “yearning for more” (Fredrickson, 2008, p. 451). Further, positivity ratios less than 1-to-1 are suggestive of a pathological level of functioning (Fredrickson, 2009; Schwartz et al., 2002). These associations are quite robust and evident in a number of populations. For example, individuals, couples, and businesses that consistently flourish report positivity levels at or greater than 2.9-to-1 (Fredrickson & Losada, 2005; Gottman, 1994; Losada & Heaphy, 2004; Schwartz et al., 2002). Those who report positivity levels between 1- and 2.9-to-1, while not diagnosed with a clinical disorder, report only moderate mental health and experience similar frequencies of illnesses and lost workdays as those who are depressed (Keyes & Lopez, 2002). Individuals being treated for clinical depression, couples with troubled marriages, and unprofitable businesses score below 1-to-1 (Fredrickson & Losada, 2005; Gottman, 1994; Losada & Heaphy, 2004; Schwartz et al., 2002).

Chapter Three: Deployment and the military spouse: A meta-analytic review

ABSTRACT

As an increasing number of American service members are married, understanding the influence of deployment on the well-being of military spouses is of growing concern. In order to determine the effect of military deployment on the psychological well-being of military spouses, a meta-analysis of 12 studies was performed. Results indicate that deployment leads to an increase in anxiety, depression, and stress, among other psychopathologies. The effect of deployment varied across studies, and in an attempt to explain this variance sample (age), deployment (branch of military, conflict, and deployment length), and study design (control type) moderators were examined. Of these moderators, only control type (pre-deployment v. non-deployed service member) significantly explained any of the variance in effect sizes. These findings indicate that deployment has a significant effect on the psychological well-being of military spouses and identify directions for future research.

INTRODUCTION

Since 1980, the US Armed Forces have been involved in a number of combat and peacekeeping missions, including Operation Desert Shield (1990), Operation Desert Storm (1991), Operation Restore Hope (Somali Civil War; 1992), Operation Enduring Freedom (2001 – present), and Operation Iraqi Freedom (2003 – 2011). These recent conflicts, specifically OEF and OIF, have resulted in the longest, most frequent, and most

cumulative deployments in US history (Tanielian & Jaycox, 2008). Consequently, the health and well-being of service members has received much attention (e.g., Hoge et al., 2004; Hosek et al., 2006); however, spouses have been described as the “overlooked casualties of war” (Numbers, Osterlund, & Ungvarsky, 2011) and less is known about the impact of deployment on their well-being.

The potential impact of deployment on military spouses could be quite varying, and deployment may be beneficial or harmful, or even have no impact at all, to military spouses. Arguments for the potential benefits of deployment focus on the independence and resiliency gained by a military spouse. Deployment necessitates that military spouses take on new responsibilities, such as maintaining the household and single parenting (Black, 1993; Tollefson, 2008). Through the successful navigation of these challenges, military spouses experience feelings of growth, resilience, and independence (Pincus et al., 2001; Weinstock, 2012). In addition, deployment provides opportunities to pursue new opportunities and establish a self- and social identity that is exclusive of their husband (Rossetto, 2009). Further, there is some evidence that suggests that deployment increases the stability of military marriages, ultimately decreasing marriage dissolution (Karney & Crown, 2007).

Contrary to this, there is evidence to suggest deployment may also be detrimental to the well-being of military spouses. In fact, McCubbin (1979) noted that deployments “emphasize the dysfunctional responses to separation,” including “spouses’ manifestations of depression, anxiety, acting out behavior, and psychosomatic complaints” (p. 238). More current research has supported these claims, with military

spouses reporting high rates of depression and anxiety (Dimiceli et al., 2010; Eaton et al., 2008) and greater use of mental health services during deployment (Eaton et al., 2008). Moreover, deployment has been associated with decreases in well-being and marital satisfaction (Burrell et al., 2006).

Reviews of the effects of deployment on the spouses and partners of military service members suggest deployment is detrimental (e.g., De Burgh, White, Fear, & Iversen, 2011), and a meta-analytic review found a small association between deployment and maladjustment in children of service members (Card et al., 2011); however, a meta-analysis has not been performed examining this relationship in military spouses. Given the conflicting findings in the literature, there is a need for a meta-analysis to determine whether deployment has a detrimental effect on the well-being of military spouses and identify moderators that lead to these conflicting findings. Thus, the first purpose of this meta-analysis is to determine the existence, direction, and magnitude of the effect of deployment on the psychological well-being of military spouses. In addition, several moderators will be tested that are believed to weaken or amplify the effect of deployment. It was hypothesized that:

Having a spouse deployed exerts a positive effect on psychological problems, such that those who have a spouse deployed exhibit higher levels of psychological problems than those without a spouse deployed.

The effect of deployment on psychological problems will be greater in younger samples, as younger spouses may lack the skills necessary for managing stress in a successful manner (Weinstock, 2012).

Deployment will exert a greater effect in spouses of service members in the Army and Marines than in the Navy. Given the dependence on ground combat operations in current warfare, service members in the Army and Marines are more likely to experience repeated and lengthy deployments to hostile territories, which may magnify the effect of deployment on the military spouse.

As a result of the US military's lengthy involvement in current conflicts in the Middle East, service members are being deployed more often and for longer periods of time than ever before. These repeated deployments may have a cumulative impact on military spouses; thus, the effect of deployment on psychological problems will be greater in spouses of service members deployed in support of OEF and OIF than in previous conflicts.

The emotional cycle of deployment (Logan, 1987; Pincus et al., 2001) describes the emotional stages that generally occur during all stages of deployment (pre-deployment, deployment, and post-deployment). Based on this model and previous findings (de Burgh et al., 2011; Mansfield et al., 2010), it is hypothesized that the effect of deployment on psychological problems will be

greater in spouses of service members who have been deployed for a longer period of time.

The effect of deployment on psychological problems will not depend on the type of control group used. That is, the effects of deployment will be the same in studies that compare spouses of deployed service members to non-deployed service members and studies that utilize a longitudinal pre-deployment and during deployment design.

METHOD

Study Selection

Two complementary search strategies were used to identify both published and unpublished research. The first strategy involved searches of the Air Force Institute of Technology (AFTI), Army Research Institute (ARI), Defense Technical Information Center (DTIC), EBSCO, Education Resources Information Center (ERIC), Google Scholar, JSTOR, Office of Navy Research (ONR), PsycINFO, PubMed, RAND Corporation, Science Direct, Sociofile, and Sociological Abstracts electronic databases. The search began with the keywords *military deployment* and then added additional terms in subsequent searches (*family, spouse, partner, psychological, or well-being*). Second, a backward search was performed by examining the reference sections of articles to be included in the meta-analysis, as well as review articles, to identify any relevant citations. As a result of these searches, a total of 36 reports were examined for potential inclusion.

For a study to be included, four criteria had to be met. First, the studies needed to include a quantitative measure of psychological well-being that was reported by the military spouse. Second, the studies needed to compare psychological well-being during spousal deployment to one of four control conditions: (a) pre-deployment data for the same spouses; (b) a sample of civilian spouses; (c) a sample of spouses of non-deployed service members; or (d) standardized normal values for the instrument. Third, studies were limited to those sampling spouses of US service members after 1980. Finally, the report had to provide enough information to compute an estimate of the effect of deployment on the psychological well-being outcome. Using these inclusion criteria, 12 studies from the 36 identified were included in the meta-analysis.

Coding of Studies and Effects

Numerous characteristics of each of these 12 studies were systematically coded. These characteristics encompassed five broad categories: (a) the research report; (b) the deployment; (c) the sample; (d) the outcome measure; and (e) the estimate of the effect. A complete list of the characteristics coded for each study can be found in Table 3.1.

For this meta-analysis, the standardized mean difference was used to estimate the effect of deployment on measures of psychological well-being. Cohen's d is a scale-less measure of the difference between two group means, and calculating d involves dividing the difference between two group means by their average standard deviation. This calculation results in a measure of the difference between two groups expressed in terms of their pooled standard deviation. In this meta-analysis, the mean of the control group

was subtracted from the mean of the deployed group and divided by the pooled standard deviation. Thus, positive values indicate that spouses of deployed service members have more psychological problems than spouses of non-deployed service members, whereas negative values indicate that spouses of deployed service members have fewer psychological problems than spouses of non-deployed service members. For continuous outcomes, effect size estimates were calculated using means, standard deviations, and sample sizes, if available. In instances where the standard deviation values were not provided, the effect size was estimated using inferential statistics (e.g., F , t or p values). Studies that used categorical outcome variables (diagnosis), odds ratios were calculated and converted to Cohen's d values.

Coder Reliability

The author, as well as two undergraduate research assistants, coded all studies. Discrepancies were found in three cases, all in the actual effect size computed. These discrepancies were resolved through discussion. Because all studies were independently coded three times and all discrepancies were resolved, a formal estimate of reliability was not calculated. In addition, evidence exists suggesting this process is highly reliable (Rosenthal, 1987).

Table 3.1. Complete list of information extracted from studies

Report Characteristics
1. Author name
2. Year
3. Type of research report (journal article, book chapter, book, dissertation, master's thesis, private report, government report, conference paper, other)
Deployment Characteristics
1. Location of deployment
2. Conflict
3. Length of deployment
4. Purpose of deployment (combat, peacekeeping)
5. Number of previous deployments
6. Danger of deployment
7. Branch of service member (Army, Navy, Marines, Air Force, other)
8. Rank of service member
9. Nature of the control group (pre-deployment, civilian, non-deployed, standardized norm)
Sample Characteristics
1. Sample label (spouse, partner)
2. Age
3. Sex
4. Ethnicity (Caucasian, African American, Asian American, Hispanic, Native American, other)
5. Education
6. Employment
7. Children
8. Number of children
9. Length of relationship
10. Satisfaction with relationship
Outcome Measure
1. Outcome
2. Type of outcome (continuous, grouping)
3. Type of outcome measure (validated, experimenter-created, single-item, other)
4. Internal consistency of measure
5. When the outcome was measured
6. Sample size for deployed and control groups
Estimate of the effect
1. Direction of the effect
2. Magnitude of the effect

Multiple Outcomes and Independence of Effects

Oftentimes studies report multiple outcome measures for which relevant effect sizes can be calculated. Since these multiple effect sizes come from the same sample, this violates the assumption of independent data points. As such, the shifting unit of analysis approach (Cooper, 2010) was utilized. Initially, each effect size provided by a study is coded as if it were an independent estimate of the relationship. For example, if a single sample provided information regarding the effect of deployment on both anxiety and depression, two effect sizes were calculated. However, for calculating the overall effect, these two effect sizes were averaged prior to analysis so that the sample only contributed one effect size. Conversely, in an analysis that examined the effect of deployment on anxiety and depression separately, this sample would provide one effect size to each category in the given analysis. Use of the shifting unit of analysis approach allows for the maximum amount of data to be retained for analysis while minimizing violations of the independent data point assumption (Cooper, 2010).

Calculating the Overall Effect

Before integrating the effect sizes, Grubbs' (1950) test was performed to identify any statistical outliers. If a statistical outlier was identified, the value was set to the value of its closest neighbor rather than omitted given to the small number of studies in this meta-analysis. Grubb's test was then repeated after replacing the original value to detect any additional outliers. This process continued until no additional outliers were identified. Initially this process was performed using the overall effect sizes combined

across subgroups (i.e., outcomes provided by a single sample), and then it was repeated for subgroup analyses in the event that the effect sizes included in the data set differed from those used in the overall effect size analyses.

All studies that met inclusion criteria were articles published in peer-reviewed journals. Thus, the possibility exists that all studies that have investigated the relationship between deployment and psychological well-being in military spouses were not obtained. In order to identify whether the distribution of effect sizes included in the meta-analysis were normally distributed, the observed effects were plotted against their respective standard errors. If the distribution is skewed, indicating a potential bias, Duval and Tweedie's (2000a; 2000b) trim-and-fill procedure provides a way to estimate the missing effect sizes that must be present in order to create a normal distribution. These missing values are then combined with the observed effects in order to assess the impact of missing data on the estimate of the effect.

The use of a weighting procedure to calculate the average effect sizes was used because it gives greater weight to effect sizes retrieved from larger samples, as larger samples give more precise estimates of the effect in the population. Each independent effect size was initially multiplied by the inverse of its variance. The sum of these products was then divided by the sum of the inverse variances (weights). Then 95% confidence intervals (CIs) were calculated for the weighted average effects. If a CI does not include zero, then the null hypothesis that deployment had no effect on psychological well-being is rejected.

Moderator Testing

Homogeneity analyses were used to test possible moderators of the relationship between deployment and psychological well-being. These analyses compare the amount of variance in the set of observed effect sizes with the amount of variance expected due to sampling error. The homogeneity of the set of effect sizes was assessed using a within goodness-of-fit statistic (Q_w). A finding of homogeneity, indicated by a nonsignificant Q_w statistic, implies that the studies appear to estimate a single population effect with any variations in effects due to sampling error alone, and adopting a fixed-effects model would be most appropriate. Conversely, a significant Q_w statistic indicates heterogeneity and suggests that study-level variance in effects is present. In this case, a random-effects model should be adopted, and moderator testing is recommended to try to explain some of the systematic variance that is present.

With regards to moderator testing, homogeneity analyses can be used to determine whether multiple subgroups of average effect sizes vary more than predicted by sampling error. In these analyses, homogeneity is assessed using a between goodness-of-fit statistic (Q_b), where a significant result indicates that the average effect sizes vary between levels of a categorical moderator more than predicted by sampling error alone. In the case of continuous moderators, meta-regression analyses were performed to assess their impact on overall heterogeneity. All analyses were conducted using Comprehensive Meta-Analysis statistical software (Version 2.0; Borenstein, Hedges, Higgins, & Rothstein, 2005).

RESULTS

The literature search yielded 12 studies that examined the effect of deployment on the psychological well-being of military spouses. These 12 studies reported 19 separate effect sizes. Characteristics of the included studies are summarized in Table 3.2. These studies were published between 1983 and 2010. Nine studies were performed during OEF and/or OIF, while three studies involved deployments during other conflicts. The median average length of deployment was 6.5 months. The median average age of the samples was 27.8 years. Studies reported the effect of deployment on anxiety, depression, dysphoria, health, psychological status, sleep, and stress.

Studies either (a) compared spouses of deployed service members to those of non-deployed service members, or (b) compared spouses of deployed service members during versus prior to deployment. Specifically, of the 12 studies, 10 used a cross-sectional design where spouses of deployed service members were compared to spouses of non-deployed service members. The remaining two studies used a longitudinal design where spouses were assessed prior to deployment and then again during deployment.

Many of the seemingly theoretically important deployment (e.g., location, purpose, previous deployments, danger) and sample characteristics (e.g., ethnicity, education, employment, children, relationship length/satisfaction) were frequently omitted from the reports. Further, all studies that met inclusion criteria were published, used validated self-report measures, and included female participants. Thus, report type, measure type, and gender were dropped as potential moderators. Ultimately, five

moderators were used in the analyses: age of sample, branch, conflict, control type, and length of deployment.

Among effect sizes examining the overall effect of deployment, one outlier was detected on the right side of the distribution ($d = 2.443$; reported by Burton, Farley, & Rhea, 2009). This outlier was Winsorized to its nearest neighbor ($d = 1.121$) and retained for analysis. One outlier was detected for the effects assessing stress ($d = 2.236$; reported by Burton et al., 2009), and it was Winsorized to its nearest neighbor ($d = .452$) and retained for analysis. No outliers were identified for the overall effects assessing anxiety and depression. Because less than three effects contributing to the overall weighted effects for dysphoria, health, psychological status, and sleep were reported, a test of outliers was not conducted.

Table 3.2. Characteristics of studies included in the meta-analysis

First Author (year)	Control Type	Age (years)	Branch	Conflict	Deployment Length (months)	Effect Size
Burton (2009)	Non-deployed	27.8		OEF/OIF	6.5	Health 2.650 Stress 2.236 Combined 2.443
Haas (2005)	Non-deployed	24.6	Marines	OEF/OIF		Stress 0.452
Haas (2006)	Non-deployed	24.9	Marines	OEF/OIF		Stress 0.295
Haas (2007)	Non-deployed	24.4	Marines	OEF/OIF		Stress 0.351
Jensen (1989)	Non-deployed		Army	Other		Psychological Status -0.061 Stress 0.196 Combined 0.067
Kelley (1994)	Pre-deployment	32.5	Navy	Other		Dysphoria 1.121
Lester (2010)	Non-deployed	33.2	Army	OEF/OIF	16.7	Anxiety 0.314
Mansfield (2010)	Non-deployed			OEF/OIF		Anxiety 0.147 Depression 0.150 Stress 0.150 Sleep 0.200 Combined 0.162
Nice (1983)	Pre-deployment	31.0	Navy	Other	3.5	Depression 0.736
Robrecht (2008)	Non-deployed	26.8	Navy	OEF/OIF	5.4	Depression 0.462
Smith (2010)	Non-deployed		Army	OEF/OIF		Depression 0.379
Steelfisher (2008)	Non-deployed	30.4	Army	OEF/OIF	9.4	Anxiety 0.533 Depression 0.434 Health 0.290 Combined 0.419

Note: OEF = Operation Enduring Freedom; OIF = Operation Iraqi Freedom

Overall Effect of Deployment

A total of 12 studies provided information regarding the association between deployment and any aspect of spousal psychological well-being. All 12 of the overall effect sizes were in the positive direction and ranged from $d = 0.067$ to 1.121 after Winsorization. The weighted average of d was 0.168 under a fixed-effects model with a 95% CI from 0.152 to 0.184 . The weighted average of d was 0.413 under a random-effects model with a 95% CI from 0.257 to 0.568 . Thus, the null hypothesis that deployment does not have an effect on spousal psychological well-being could be rejected under both the fixed- and random-effects models ($p < .001$). Further, the homogeneity test of the effect sizes revealed variance beyond that expected by sampling error alone ($Q_{II} = 44.148, p < 0.001$). Therefore, a random-effects model was adopted for subsequent analyses.

Potential publication bias was assessed using the trim-and-fill method. Initially, a plot of the observed effect sizes against their respective standard errors was examined for asymmetry (see Figure 3.1). No evidence was found that supported missing effects on the left side of the distribution (i.e., those that would reduce the estimate of the positive overall d), so analyses proceeded without imputing any additional values.

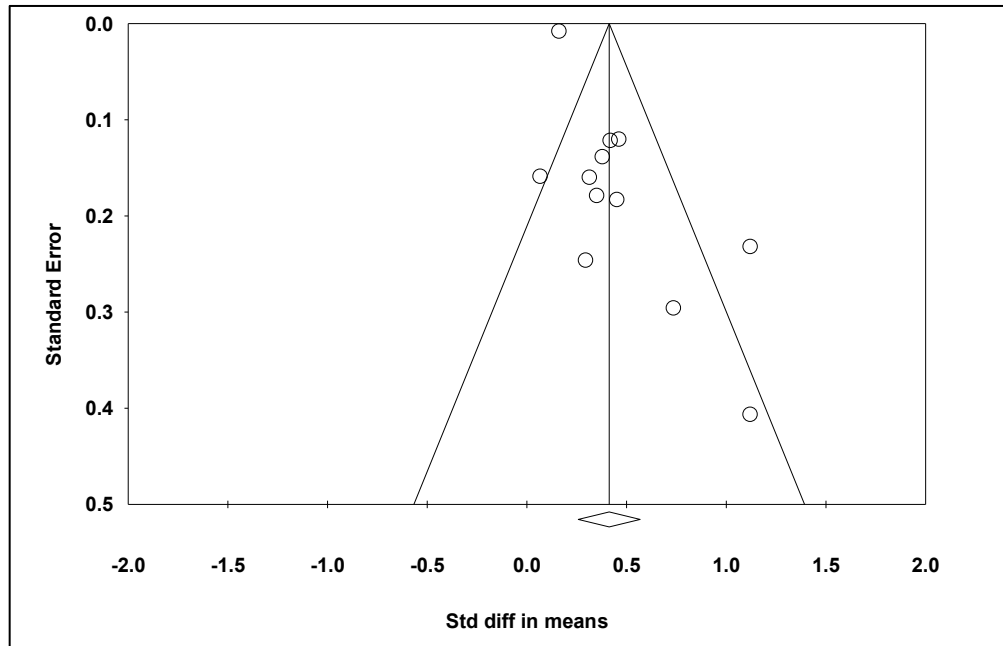


Figure 3.1: A funnel plot of the standard error by standardized difference in means for all studies included in the meta-analysis.

Three of the effect sizes assessed anxiety as an outcome. The effects ranged from $d = 0.147$ to 0.533 , with no statistical outliers. The weighted average effect was significant ($d = 0.325$, 95% CI = $0.036, 0.615$, $p = .028$). Heterogeneity analyses suggest that systematic variance was present ($Q_2 = 22.932$, $p < 0.001$). No additional effects were imputed after conducting trim-and-fill analyses.

Five studies reported depression as an outcome, with the effects ranging from $d = 0.150$ to 0.736 . The weighted average effect was significant ($d = 0.375$, 95% CI = $0.172, 0.578$, $p < 0.001$). Examinations of the test of heterogeneity suggest that there was more variation in the effects than could be attributed to sampling error alone ($Q_4 = 25.219$, $p < 0.001$). Trim-and-fill analyses identified two missing effect sizes (see Figure 3.2). The imputation of these effect sizes changed the mean effect to $d = 0.303$ (95% CI = $0.143, 0.463$) under the random-effects model.

Both effect sizes of deployment on the health of spouses were positive, with reported effects of $d = 0.290$ and 2.650 . The weighted average effect was not significantly different from zero ($d = 1.464$, 95% CI = $-0.848, 3.777$, $p = 0.215$). Further, analysis suggests that there was significant systematic variance in these two effects ($Q_1 = 62.673$, $p < 0.001$). Because there were fewer than three effects contributing to the overall effect, the trim-and-fill method could not be utilized.

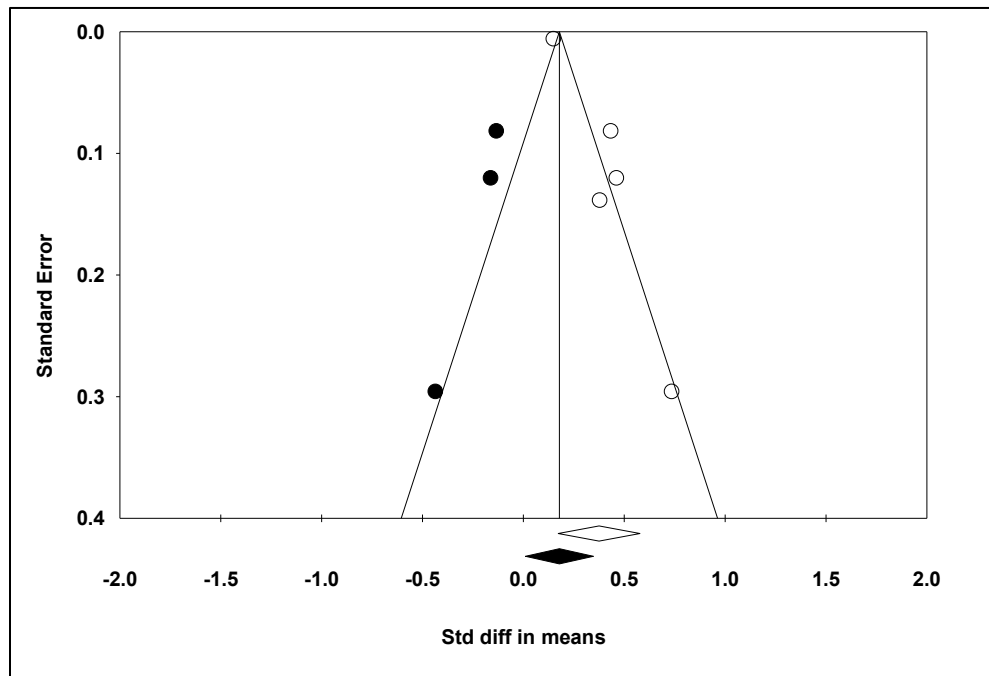


Figure 3.2: A funnel plot of the standard error by standardized difference in means for studies (open circles) that reported depression as an outcome, as well as the three imputed studies (filled circles) as identified by the trim-and-fill method.

Six studies assessed the effect of deployment on stress. The effects ranged from $d = 0.150$ to 0.452 after Winsorization. The weighted average was significant ($d = 0.201$, 95% CI = $0.183, 0.219$, $p < .001$). The test of homogeneity was nonsignificant, suggesting that all effects were from the same population ($Q_5 = 4.005$, $p = 0.549$). While searching for missing effects on the left side of the mean, evidence for three missing studies was found. Imputing these values changed the mean effect to $d = 0.199$ (95% CI = $0.182, 0.218$).

Finally, single effects were reported for three outcomes. Deployment was found to have a significant positive effect on dysphoria ($d = 1.121$, 95% CI = $0.165, 1.918$, $p < 0.01$) and sleep problems ($d = 0.150$, 95% CI = $0.132, 0.168$, $p < 0.001$). Conversely, deployment did not have an effect on the psychological status of military spouses ($d = -0.061$, 95% CI = $-0.377, 0.255$, $p = 0.704$).

Moderator Analyses

Independent moderator analyses of the effect of deployment on psychological well-being were performed using five moderators: age of sample, branch, conflict, control type, and length of deployment. The results of these analyses can be found in Table 3.3.

Age of Sample

Nine studies provided specific information about the age of the sample of spouses used. The age of the sample did not significantly predict (moderate) the association

between deployment and psychological well-being ($b = 0.003$, $Q_I = 0.031$, $p = 0.860$).

Branch

Studies were divided into three groups on the basis of the branch of the US Armed Forces to which the majority of the service members belonged. Of the ten studies that reported information regarding the branch, four samples were married to Soldiers in the US Army, three samples were married to Marines, and three samples were married to Sailors in the US Navy. The average weighted effect of deployment on psychological well-being did not significantly vary for the three different branches ($Q_2 = 3.099$, $p = 0.212$).

Conflict

Nine studies used data collected during deployments associated with OEF and OIF, in Afghanistan and Iraq respectively. The other three collected data during various conflicts in the Persian Gulf. Thus, studies were either categorized as OEF/OIF or Other. There was no difference between the average weighted effect of deployment when service members were deployed in support of OEF/OIF compared to when they were deployed in support of other conflicts ($Q_I = 1.174$, $p = 0.279$).

Control Type

With regard to control type, studies were categorized as either using spouses of non-deployed service members or using pre-deployment data. Moderator analyses found that the average effect size depended on the control type ($Q_I = 8.560$, $p < .01$). Studies

that used a pre-deployment control ($d = 0.869$) had a larger average effect than studies that used a non-deployed service member control ($d = 0.504$). However, control type did not explain all of the variation, and a significant amount of residual heterogeneity remained ($Q_{10} = 114.611, p < 0.001$).

Length of Deployment

Only five studies provided information regarding the length of time the service member had been deployed at the time of data collection. The length of deployment did not significantly predict the association between deployment and psychological well-being ($b = -.024, Q_1 = 2.136, p = 0.144$).

Table 3.3. Results of moderator analyses examining the effect of deployment on psychological well-being of military spouses

Moderator	<i>k</i>	<i>d</i>	95% Confidence Interval			<i>Q_b</i>
			Slope	Lower Limit	Upper Limit	
Age	9		0.003	-0.035	0.042	0.031
Branch						3.099
Army	4	0.318***		0.179	0.457	
Marines	3	0.378**		0.155	0.601	
Navy	3	0.544***		0.334	0.755	
Conflict						1.174
OEF/OIF	9	0.169***		0.153	0.185	
Other	3	0.313*		0.053	0.572	
Control Type						8.560**
Non-deployed	10	0.504***		0.246	0.762	
Pre-deployment	2	0.869***		0.400	1.338	
Length of Deployment	4		-0.024	-0.057	0.008	2.136

Note: OEF = Operation Enduring Freedom; OIF = Operation Iraqi Freedom

* $p < .05$, ** $p < .01$, *** $p < .001$

DISCUSSION

This study summarized the existing empirical literature that examined the relationship between deployment and psychopathology in military spouses using meta-analytic methodology. The results of this meta-analysis suggest that deployment has a positive effect on psychopathology, such that military spouses experience increased levels of anxiety, depression, dysphoria, sleep problems, and stress during deployment. Results for health complaints were in the predicted direction but not statistically significant, while psychological status appeared to be unaffected by deployment. Although on average military spouses reported higher levels of psychopathology during deployment, there is likely variation in military spouses' responses to deployment that deserves consideration.

In support of this variability, the results of the studies were found to be heterogeneous. In an attempt to explain this variability, coded study, deployment, and sample characteristics were examined as potential predictors of these results. Unfortunately, many relevant characteristics (e.g., rank, previous deployment experience, and combat vs. noncombat deployment) were often not reported in the literature. However, age, branch, conflict, control type, and length of deployment were evaluated. Contrary to study hypotheses, only control type explained any of the between-study variability that was present. Of particular interest is the lack of deployment characteristics, namely branch, conflict, and length of deployment, as significant moderators of the relationship between deployment and psychopathology.

The inability of branch to explain any of the between-study variance may be due to the inability of conflict to do the same. Nine of the studies used samples whose husbands were deployed in support of OEF and OIF, which have relied primarily on the ground combat forces of the Army and Marines. Conversely, two of the three studies

utilizing Navy wives (Kelley, 1994; Nice, 1983) took place during other conflicts, primarily throughout the Persian Gulf War era. The finding that conflict did not moderate the relationship suggests that the lengthy and repeated deployments as part of the Global War on Terror may not have any greater impact on spouses' psychological well-being than earlier US military conflicts.

Length of deployment also failed to explain any between-study variability. This is surprising, as previous studies have found that prolonged deployments are associated with more psychopathological diagnoses (Mansfield et al., 2010) and spouses report that separations become increasingly more difficult to handle as the length of deployment increases (Orthner, 2002; Orthner & Rose, 2005). Future research should adopt longitudinal studies that examine the well-being of military spouses at various stages (e.g., pre-deployment, early deployment, mid-deployment, late-deployment, and post-deployment), as spouses may experience a wide range of emotions throughout the deployment cycle (Pincus et al., 2001).

Studies that utilized a single group with psychological well-being assessed prior to and during deployment were found to have a larger effect than studies using a two group, non-deployed service member control design. This finding needs to be viewed in light of the limitation that only two studies (Kelley, 1994; Nice, 1983) adopted a pre-deployment control; however, it does suggest that study design may influence the effect of deployment and clearly needs to be considered in future research.

In addition to the moderators explored in this meta-analysis, additional factors have been identified as potentially influential. A small number of studies have begun to examine how individual factors, such as coping style, (Dimiceli et al., 2010; Padden et al., 2011; Wheeler & Torres Stone, 2010), as well as environmental factors, such as community support (Huebner, Mancini, Bowen, & Orthner, 2009), may play a role in

buffering or exacerbating the effects of deployment on military spouses. However, future research should investigate how individual (e.g., age, race), family (e.g., children, relationship satisfaction), deployment (e.g., combat intensity), and environment (e.g., social and unit support) influence deployment's effect on spouses. If factors such as these can be identified, they may be potential targets for interventions.

The primary limitation of this meta-analytic review is the small amount of existing literature (12 studies) and the lack of systematic reporting of potential moderators in the relationship between deployment and spousal psychological well-being. The majority of literature examining this relationship is qualitative, and this meta-analysis highlights the need for additional studies that examine this relationship, especially longitudinally. Further, many of these studies were cross-sectional in nature, and thus do not speak to causality in the relationship between deployment and spousal well-being.

Despite these limitations, this is the first meta-analytic review of the existing research on the relationship between military deployment and spouses' psychological well-being. It extends the existing reviews by providing a quantitative assessment with regard to the presence and magnitude of this relationship, as well as investigating sources of the varying results in studies. The results indicate that spouses of deployed service members report higher levels of psychopathology. Further, this study provides a foundation for future research investigating why spouses vary in their reactions to deployment and the mechanisms by which deployment impacts military spouses.

Chapter Four: Depressive symptoms among military spouses during deployment: The protective effect of positive emotions

ABSTRACT

Using the Broaden-and-Build Theory of Positive Emotions, the relationships among stress, positivity, and depressive symptoms were examined in a sample of military spouses during deployment ($N = 367$). Over one-third of the spouses reported moderately severe levels of depressive symptoms. After controlling for demographic and deployment variables, stress had a positive association with depressive symptoms ($\beta = .59, p < .001$), while positivity had a negative association ($\beta = -.43, p < .001$). Positivity was also found to play a moderating role on the relationship between stress and depressive symptoms ($\beta = -.33, p < .001$). Spouses with lower positivity reported more depressive symptoms at both low and high levels of stress compared to those with higher positivity. The final model, including both direct and moderating variables, accounted for 67% of the total variance in depressive symptoms. Practical implications are discussed in terms of the importance of developing positivity in military spouses.

INTRODUCTION

Recent developments in the field of positive psychology suggest that positive emotions have significant adaptive value, as higher levels of positive emotions have been shown to foster adaptation to adversity, promote health and well-being, and serve as a protective factor against stress (Danner et al., 2001; Fredrickson & Losada, 2005; Keyes, 2002). Further, the benefits of positive emotions have been shown to enhance the

psychological adjustment of military personnel to traumatic war-related stressors (Riulli et al., 2010). Consequently, as part of an initiative to enhance Soldier readiness, the US Army has incorporated positive emotions into its Comprehensive Soldier Fitness program using the broaden-and-build theory of positive emotions (Bates et al., 2010; Cornum, Matthews, & Seligman, 2011).

According to this theory, positive and negative emotions have distinct yet complementary adaptive functions (Fredrickson, 1998; 2001). The adaptive value of negative emotions (e.g., anger, fear) lies in their ability to narrow an individual's thought-action repertoire in order to quickly and decisively react to an adverse situation in a particular manner (e.g., escape when afraid; Fredrickson et al., 2000). Negative emotions are viewed as having an evolutionary advantage, as they aid survival during immediate life-threatening situations. Conversely, positive emotions (e.g., contentment, joy) elicit a variety of enduring benefits, including the production of pleasant sensations and increases in cognition and social connectedness. These positive experiences broaden one's thought-action repertoire, thereby expanding an individual's cognitive processes, widening the potential responses that come to mind, and ultimately resulting in more thoughtful decision-making and improved adaptation to adversity. In turn, this broadened cognition builds personal resilience resources, including social, intellectual, and physical resources, which enhance one's adaptation to stressful conditions and overall well-being (Fredrickson, 2004). Further, positive emotions are also thought to have an undoing effect on negative emotions, whereby the broadened cognition that positive emotions elicit liberates individuals from the lingering narrowed mindset due to

negative emotions (Fredrickson, 2000). Empirical evidence supports the adaptive function of positive emotions, as studies have found that anxious individuals recover more quickly following exposure to activities that evoke positive emotions (Fredrickson et al., 2000). In addition, positive emotions have been shown to increase one's likelihood of bouncing back after a stressful experience (Fredrickson, 2004), accelerate the time needed to recover (Fredrickson & Levenson, 1998; Tugade & Fredrickson, 2004), and serve as a resource for people coping with adversity (Folkman & Moskowitz, 2000). Finally, positive emotions have displayed the ability to directly impact physical health (Fredrickson & Levenson, 1998), psychological functioning (Nelson & Knight, 2010), and emotional well-being (Keyes, 2002), as well as moderate the effect of stress on coping (Folkman, 1997) and depression (Davis et al., 1998).

Fredrickson and Losada (2005) measured positivity as the ratio between one's reported frequency of experienced positive emotions to the frequency of negative emotions, known in the broaden-and-build theory of positive emotions as the positivity ratio. The implication is that positive emotions are necessary to overcome the toxicity of negative emotions (Baumeister et al., 2001; Rozin & Royman, 2001), and well-being is associated with high ratios of positive to negative emotions (Schwartz, 1997). They determined that a positivity ratio higher than 2.9 is sufficient to promote human flourishing, a state in which individuals operate at an optimal level of functioning (Fredrickson & Losada, 2005). By contrast, a ratio below 2.9 is suggestive of languishing individuals who are "stuck in a rut" and "yearning for more" (Fredrickson, 2008, p. 451). Further, a positivity ratio of less than 1.0 suggests a pathological level of

functioning, often reported by individuals who are clinically depressed (Fredrickson, 2009; Schwartz et al., 2002). These associations are quite robust and are evident in a number of populations. For example, individuals, couples, and organizations that are flourishing report positivity levels above 2.9. Those with positivity levels below 2.9, while not diagnosable with a clinical disorder, tend to report only moderate mental health and experience as many illnesses and lost workdays as those who are depressed (Keyes & Lopez, 2002). On the other hand, individuals being treated for clinical depression, couples with troubled marriages, and unprofitable businesses scored below 1.0 (Fredrickson & Losada, 2005; Gottman, 1994; Losada & Heaphy, 2004; Schwartz et al., 2002).

Although improving Soldiers' positivity has been incorporated into the Comprehensive Soldier Fitness program, the broaden-and-build theory of positive emotions has not been applied to promote wellness among spouses of those serving in the military; however, the well-being of those married to service members is vital, not only to maintain a high level of functioning within the individual family unit, but also the military unit. Spouses who perceive military life as stressful display reduced psychological well-being (Rosen et al., 1994), and service members with dissatisfied spouses have higher attrition rates relative to those satisfied with military life (Drummet et al., 2003). Conversely, spouses who cope well with the demands of military life are more supportive of their service member's career (Pittman et al., 2004), and as a result, these service members become more committed to the military (Bourg & Segal, 1999). Therefore, the spouses' ability to adapt to the emotional stressors of military life plays a

critical role in service member readiness as well as the retention of an experienced military force.

The stressors that military spouses face are unmatched in the civilian world and include frequent relocations, lengthy deployments followed by abrupt reunions, and normative constraints instilled by the military (Segal, 1986). Of these unique stressors, military spouses cite deployments as their major dissatisfaction with military life (Dandeker et al., 2006). Current conflicts in the Middle East have resulted in American service members facing frequent and lengthy combat deployments. Although most service members appreciate the opportunity to deploy and use their training in meaningful, real-world combat operations (Hosek et al., 2006), spouses of deployed service members not only fear for their loved ones' safety, but also struggle with disruption of routine, becoming the sole-decision maker, coping as a single parent, and loneliness and isolation (Black, 1993; Figley, 1993; Segal, 1986; Tollefson, 2008). Repeated deployments, in combination with the aforementioned stressors of being a military spouse and the conventional stressors of everyday life, place military spouses at serious risk of developing depression.

The inability to successfully manage the demands of military life may be a potential mechanism by which psychopathologies are developed, as the association between stressful life events and the onset of mental disorders is well documented (e.g., Kendler et al., 1999; Kessler, 1997). Depression, among other psychopathologies, has been shown to disproportionately impact the spouses of those serving in the military, with military spouses reporting a prevalence rate of 19% (Mansfield et al., 2010), which is

over three times that of their civilian peers (Kessler et al., 2005). This discrepancy is even greater when service members are deployed, as wives are 1.24 times more likely to be depressed while their husbands are deployed relative to when their husbands are home; nearly 25% of wives are diagnosed with depressive disorder during the deployment of their husbands (Mansfield et al., 2010). Similarly, the use of mental health services also increases during deployments (Eaton et al., 2008).

While previous studies have examined the effects of deployment on a variety of stress-related psychosocial outcomes in military spouses, no studies were found that assessed the ability of positivity to serve as a protective factor against depression in this population. Therefore, the purpose of the present study was to explore the direct and interactive effects of perceived stress and positivity on depressive symptoms among wives of deployed active-duty Army personnel. It was hypothesized that perceived stress would have a positive association with depressive symptoms, while positivity would have a negative association with depressive symptoms. Further, we expected that positivity would moderate the association between stress and depressive symptoms, such that high levels of positivity would lessen the influence of perceived stress on depressive symptoms (see Figure 4.1).

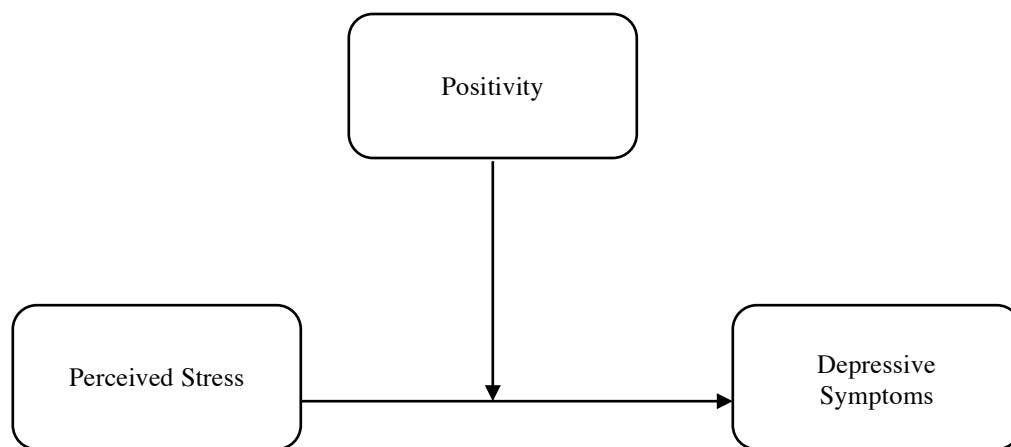


Figure 4.1: Hypothesized relationships among perceived stress, positivity, and depressive symptoms in military spouses during deployment.

METHOD

Participants and Procedures

Participants were obtained from two independent convenience samples of spouses whose husbands were stationed at Fort Hood, Texas and deployed in support of OIF (Iraq; $n = 77$) or OEF (Afghanistan; $n = 290$). Participants whose husbands were deployed to Iraq with the 4th Infantry Division voluntarily completed a survey during Spouse Appreciation Day at Fort Hood. This day, hosted once per month by the FRG, is designed to provide spouses with information and support. As the spouses gathered, they were given the opportunity to complete the survey. Further, they were assured that their responses were anonymous and their decision to participate or not would have no effect on their relationship with the Army or the university conducting the study.

Participants whose husbands were deployed to Afghanistan with the 1st Infantry Division were granted access to an online version of the survey via flyers posted on the FRG's password-protected website (<http://www.armyfrg.org>). This website is visited frequently, as it is the primary source of information for spouses of deployed Soldiers. The survey was posted on Survey Monkey, where participants could anonymously respond. To encourage participation, those who completed the survey could choose to enter their email address into a random drawing to win a gift certificate to a local business (valued at \$20). One prize was awarded for every 10 surveys completed.

These two independent samples were collapsed into a single sample ($N = 367$) for the statistical analyses. Doing so not only increased statistical power, but also provided an overall sample that is a more accurate representation of the Army population. A

variable was included in all analyses to control for whether participants were married to Soldiers deployed to Iraq or Afghanistan.

The majority of participants were married to junior enlisted Soldiers (53%), followed by noncommissioned officers (34%) and commissioned officers (13%). The participants' husbands had been deployed to the Middle East for an average of 11 months in a location perceived as dangerous, given a reported mean of 8.48 on a scale from 1 (*not dangerous*) to 10 (*very dangerous*). Further, participants had experienced an average of two deployments, with the number of deployments ranging from one to seven.

Participants ranged in age from 19 to 54, with a mean age of 27 (± 5.75) years. The majority were Caucasian (66%), followed by Hispanic/Latino (18%), African American (11%), Asian/Pacific Islander (3%), Native American (1%), and other (1%). With regard to education, 4% had a post-graduate degree, 26% had a Bachelor's degree, 7% had an Associate's degree, 51% had some college, 11% had a high school diploma/GED, and 1% had some high school. Participants were married an average of five years, 83% had children, with approximately two children per household, and 22% maintained employment outside the home.

Based on recent demographic data from Defense Manpower Data Center (Maxfield, 2011), the current sample appeared to be representative of the target population with respect to age and number of children. With regard to spousal rank, 46% of the active duty US Army is junior enlisted, while 37% are noncommissioned officers, and 17% are commissioned officers. Therefore, the current sample is comparable in rank to the overall Army. In terms of ethnicity, the active duty US Army is composed of 62%

Caucasian, 20% African American, 11% Hispanic, 4% Asian, and 3% other; thus, the current sample was similar to the total Army population with regard to proportion of Caucasian respondents, but slightly overrepresented Hispanics and underrepresented African Americans.

Measures

The survey instruments assessed participant demographic characteristics, deployment characteristics, perceived stress, positivity, and depressive symptoms. Each of these measures is detailed below, and a copy of the entire instrument may be found in Appendix E.

Demographics

Participants were asked to report personal characteristics, including age, ethnicity, education level, employment status, length of marriage, and number of children.

Deployment Characteristics

Participants were asked to report characteristics related to the present deployment, including husband's rank, length of present deployment, perceived danger of husband's present location, and total number of deployments ever experienced. Perceived danger of husband's location was measured on a 10-point Likert scale from 0 (*not dangerous*) to 10 (*very dangerous*).

Perceived Stress

Participants' perceptions of stress were measured using the 10-item Perceived Stress Scale (PSS; Cohen et al., 1983). Designed to measure how unpredictable, uncontrollable, and overloaded participants perceive their lives, the PSS assesses how often individuals have felt or thought a certain way during the past month. Sample items included: "In the last month, how often have you felt that you were unable to control important things in your life?" and "In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?" Responses were measured on a Likert scale from 0 (*never*) to 4 (*very often*) and were summed for a total score. Reliability of the PSS was strong ($\alpha = .84$), which is similar to the reliabilities found during the development of the measure ($\alpha = .84 - .86$; Cohen et al., 1983).

Positivity

Positive and negative emotions were measured using the 20-item Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988), with positivity representing the ratio of positive emotions to negative emotions (Fredrickson & Losada, 2005). On a Likert scale from 1 (*not at all*) to 5 (*very much so*), participants indicated to what extent they generally experienced various positive emotions, such as "excited," "enthusiastic," "inspired," and "interested," and negative emotions, such as "irritable," "upset," "distressed," and "afraid." The number of positive emotions experienced at least "moderately" (≥ 3) and the number of negative emotions experienced at least "a little" (≥ 2) were tallied, with the different thresholds in place to account for negativity bias and

positive offset. Negativity bias reflects the phenomenon that individuals give more weight to negative rather than positive emotions (Baumeister et al., 2001), while positivity offset reflects the phenomenon that people tend to feel at least mild positive emotions most of the time (Cacioppo et al., 1999). A positivity score was then calculated by dividing the sum of the positive emotion items by the sum of the negative emotion items. Reliability was strong for both the positive emotion items ($\alpha = .91$) and negative emotion items ($\alpha = .84$) and corresponded well to those found in the initial psychometric work for both positive ($\alpha = .88$) and negative ($\alpha = .87$) emotion items (Watson et al., 1988).

Depressive Symptoms

The 20-item Center for Epidemiological Studies Depression Scale (CES-D) was used to measure depressive symptoms experienced during the past week, such as depressed mood, feelings of guilt, worthlessness, helplessness, and restless sleep (Radloff, 1977). Sample items included “I was bothered by things that usually don’t bother me” and “I felt everything I did was an effort.” Responses ranged from 0 (*rarely or none of the time; less than one day*) to 3 (*most or all of the time, 5-7 days*), and were summed for a total score. A CES-D score of 16 or greater is considered a moderately severe level of depressive symptoms (Radloff, 1977). Of the overall sample in the present study, 39% reported a score of 16 or higher. Reliability of the CES-D was strong ($\alpha = .81$) and comparable to the estimates of reliability in general populations used during the development of the measure ($\alpha = .85$; Radloff, 1977).

Statistical Analyses

Hierarchical linear regression analyses were conducted using the Statistical Package for the Social Sciences (SPSS, 2009) version 18. This statistical analysis allows for the examination of the direct effects of stress and positivity on depressive symptoms, as well as the interactive effect of stress and positivity, after controlling for the variance associated with deployment location (Iraq or Afghanistan) as well as other continuous and categorical demographic and deployment variables that were significantly correlated with depressive symptoms (Frazier, Tix, & Barron, 2004). Post-hoc moderation analyses were also conducted according to the guidelines of Aiken and West (1991). Preliminary analyses indicated that the statistical assumptions of power, normality, linearity, multicollinearity, independence, and homoscedasticity were satisfied. All continuous predictors were mean-centered to minimize multicollinearity.

Length of marriage, number of deployments, length of deployment, and perceived level of danger were retained as continuous control variables. Due to the high correlation ($r = .86$) between age and length of marriage, age was excluded from analyses. Categorical demographic variables were dichotomized based on conceptual relevance: location of deployment (0 = *Iraq*; 1 = *Afghanistan*), spousal rank (0 = *junior enlisted*; 1 = *noncommissioned and commissioned officers*), minority (0 = *Caucasian*; 1 = *minority*), education (0 = *no college degree*; 1 = *college degree obtained*), employed (0 = *unemployed*; 1 = *employed*), and children (0 = *no children*; 1 = *has children*).

RESULTS

Descriptive Statistics

Table 4.1 displays the correlations, means, standard deviations, and range values for all variables. Stress had a significant positive correlation with depressive symptoms and a significant negative correlation with positivity, while positivity had a significant negative correlation with depressive symptoms. With regard to the control variables, wives of commissioned officers and those who had experienced more deployments reported lower levels of stress and depressive symptoms and higher levels of positivity. Associations among the control variables indicated that spouses of Soldiers deployed to Afghanistan were more likely to be married to junior enlisted Soldiers, had been married for shorter periods of time, and their spouses had been deployed for longer durations in a location perceived to be more dangerous as compared to spouses with husbands in Iraq.

Table 4.1. Correlations, means, standard deviations, and ranges for all study variables

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1. Stress	--											
2. Positivity	-.37**	--										
3. Depressive Symptoms	.71**	-.52**	--									
4. Length of Marriage	-.17**	.10	-.23**	--								
5. Number of Deployments	-.16**	.13*	-.24**	.59**	--							
6. Length of Deployment	.04	-.02	-.04	-.20**	-.02	--						
7. Level of Danger	-.02	.03	.02	-.08	.04	.13*	--					
8. Location of Deployment [†]	-.03	.06	-.01	-.38**	-.16**	.64**	.32**	--				
9. Spousal Rank [†]	-.28**	.17**	-.21**	.33**	.08	.27**	-.12*	-.30**	--			
10. Race [†]	.11*	.05	.06	-.06	.03	.02	.01	.00	-.08	--		
11. Education [†]	-.17**	.09	-.17**	.12*	.08	-.18**	-.06	-.22**	.33**	-.01	--	
12. Employed [†]	.05	-.01	.08	-.18**	-.13*	-.11*	-.09	-.05	.02	.02	.12*	--
13. Children [†]	-.05	.02	-.10	.26**	.29**	-.15**	.15**	.13*	-.08	.09	-.11*	-.53**
Mean	15.59	3.43	16.08	5.02	1.93	10.61	8.48	--	--	--	--	--
Standard Deviation	6.87	3.62	9.39	4.71	0.85	1.32	1.49	--	--	--	--	--
Minimum	0.00	0.00	1.00	0.05	1.00	1.00	2.00	--	--	--	--	--
Maximum	30.00	25.00	52.00	30.00	7.00	15.00	10.00	--	--	--	--	--

* $p < .05$, ** $p < .01$ (2-tailed)

Note: Correlations between continuous variables are Pearson, while those including dichotomized variables are point-biserial.

[†] Location of Deployment (0 = Iraq; 1 = Afghanistan), Spousal Rank (0 = *junior enlisted*, 1 = *noncommissioned and commissioned officer*), Race (0 = *Caucasian*, 1 = *Minority*), Education (0 = *no college degree*, 1 = *college degree obtained*), Employed (0 = *unemployed*, 1 = *employed*), and Children (0 = *no children*, 1 = *has children*)

Regression

Deployment location and other demographic and deployment variables significantly correlated with depressive symptoms (length of marriage, number of deployments, spousal rank, and education) were entered into Model 1, and explained 11% of the variance in depressive symptoms (see Table 4.2). Following the entry of perceived stress and positivity in Model 2, the total variance explained by the model was 58% ($F_{7, 340} = 71.02, p < .001$). The two focal predictors explained an additional 47% of the variance in depressive symptoms, after controlling for the demographic and deployment variables ($F \text{ change}_{2, 340} = 196.89, p < .001$). In the final model, both perceived stress ($\beta = .59, p < .001$) and positivity ($\beta = -.43, p < .001$) were associated with depressive symptoms, while all demographic and deployment control variables became non-significant. To examine the ability of positivity to moderate the effect of stress on depressive symptoms, the interaction term (perceived stress x positivity) was tested in Model 3. This moderation variable was significant ($\beta = -.33, p < .001$), resulting in the explanation of an additional 9% of the variance ($F \text{ change}_{1, 339} = 91.49, p < .001$). The final model explained 67% of the variance in depressive symptoms.

Table 4.2. Summary of hierarchical regression analysis for variables predicting depressive symptoms

Variable	Model 1			Model 2			Model 3		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Length of Marriage	-.22	.14	-.11	-.15	.10	-.07	-.10	.09	-.05
Number of Deployments	-1.88	.70	-.17**	-.76	.48	-.07	-.55	.43	-.05
Location of Deployment [†]	-3.78	1.31	-.16**	-.66	.91	-.03	.30	.81	.01
Spousal Rank [†]	-4.72	1.57	-.17**	.87	1.11	.03	.27	.99	.01
Education [†]	-2.31	1.05	-.12*	-.98	.72	-.05	-.58	.64	-.03
Stress				.80	.05	.58***	.81	.05	.59***
Positivity				-.72	.10	-.28***	-1.12	.10	-.43***
Stress X Positivity							-.09	.01	-.33***
<i>R</i> ²		.11			.58			.67	
<i>F</i> for change in <i>R</i> ²		9.64***			196.89***			91.49***	

* $p < .05$, ** $p < .01$, *** $p < .001$

[†] Location of Deployment (0 = Iraq; 1 = Afghanistan), Spousal Rank (0 = *junior enlisted*, 1 = *noncommissioned and commissioned officer*), Education (0 = *no college degree*, 1 = *college degree obtained*)

Post-hoc probing of the significant interaction term was done according to the guidelines of Aiken and West (1991). Plotting the interaction was done to depict the regression of stress on depressive symptoms for various levels of positivity. Aiken and West (1991) recommend the use of three values for the moderating variable, in this case positivity, that represent the mean, one standard deviation above the mean, and one standard deviation below the mean; however, when theory and previous research suggest values of the moderating variable that may be of interest, those values may be used. Based on the work of Fredrickson and Losada (2005), three positivity cutoff scores were identified and used to plot the interaction: flourishing (positivity ratio > 2.9), languishing (positivity ratio $= 1.0 - 2.9$), and depressed (positivity ratio < 1.0). Low and high values of stress were calculated as one standard deviation below and above the mean, respectively.

Figure 4.2 depicts the pattern of depressive symptoms for the three levels of positivity. The less positivity a spouse reported the stronger the relationship between stress and depressive symptoms. But regardless of level of positivity, spouses did not meet the criterion (≥ 16 CES-D score) for a moderately severe level of depressive symptoms at low stress levels. As stress levels rose, all wives reported an increase in depressive symptoms; however, those who were flourishing remained well below the aforementioned CES-D criterion even at high levels of stress. Conversely, both wives who reported languishing and depressed levels of positivity exceeded the criterion at high levels of stress; further, those with depressed levels of positivity reported nearly twice as many depressive symptoms as flourishing wives.

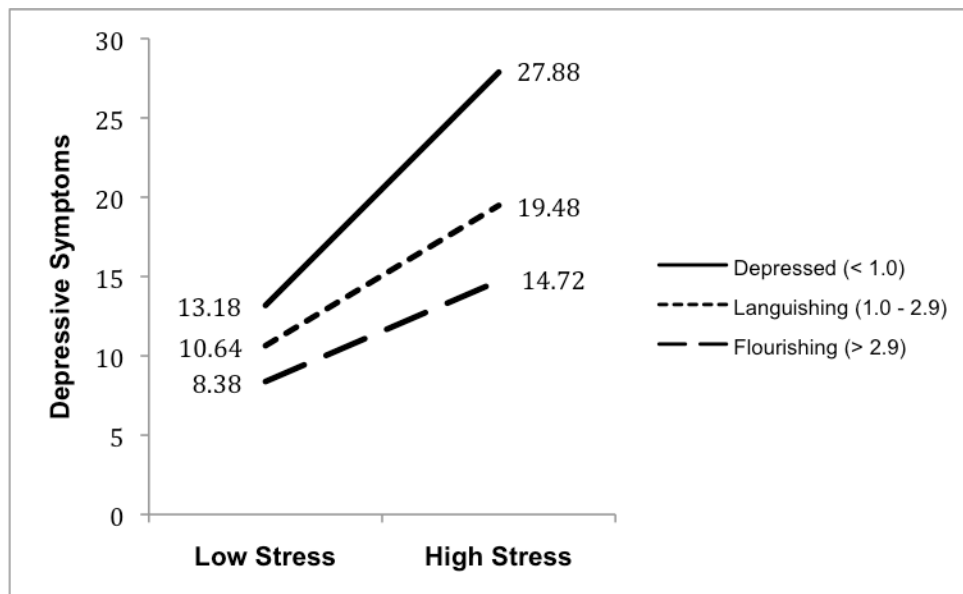


Figure 4.2: Positivity as a moderator of the relationship between perceived stress and depressive symptoms.

DISCUSSION

This exploratory study used Fredrickson's broaden-and-build theory of positive emotions (Fredrickson, 1998; 2001) as a guide to examine the relationships among stress, positivity, and depressive symptoms in military spouses during deployment after controlling for a number of demographic and deployment variables. Positivity moderated the relationship between stress and depressive symptoms, supporting Fredrickson's undoing hypothesis that positive emotions down-regulate the negative effects of stress (Fredrickson et al., 2000). This interaction between stress and positivity revealed that higher levels of positivity protect military spouses from developing depressive symptoms at both low and high levels of stress.

According to Fredrickson and Losada (2005), a positivity ratio of 2.9 and higher is indicative of individuals who are flourishing, while a ratio below 2.9 is reflective of languishing individuals; further, a positivity ratio of less than 1.0 may be a marker for clinical depression (Fredrickson, 2009). Of US adults, approximately 17% are characterized as flourishing, in that they report optimal social and psychological well-being (Keyes, 2002); comparatively, 40% of participants in the present study reported positivity ratios of at least 2.9, signifying that a large portion of military spouses are functioning at a high level. However, 19% reported a ratio below 1.0, which suggests clinical depression, a percentage nearly four-times that of the national sample (4.7%; Keyes, 2002). Further, 39% of the present sample reported moderately severe levels of depressive symptoms. Future research should examine whether the higher proportion of military spouses at both extremes – flourishing and depressed – is representative of the

true military spouse population. In particular, the high proportion of military spouses at the depressed extreme is problematic, as positivity ratios less than 2.9 not only impact the mental health of the military spouse but also the health of the marriage (Fredrickson, 2009; Gottman, 1994; Schwartz et al., 2002), threatening the spouses' satisfaction with military life and increasing Soldier attrition (Drummet et al., 2003; Rosen et al., 1994).

In light of these findings, in addition to the current programs available to the military Soldier, programs are also needed to increase the positivity of military spouses. Traditionally, military families were expected to adapt to the needs of the military; however, with the adoption of an all-volunteer force and an increase in the percentage of married military personnel, recognition of military family concerns has become a necessity (Albano, 1994; Segal, 1986). Furthermore, the increased reliance on the military since September 11th has placed high demands on military families, and this demand is increasingly being met with intolerance and dissatisfaction (Harrell, 2002). In response, Drummet and colleagues (2003) have suggested that the military adopt Family Life Educators (FLEs) to “strengthen and enrich individual and family well-being” (Arcus, Schvabeveldt, & Moss, 1993, p. 5). Trained to focus on prevention instead of post-crisis management, FLEs emphasize education and growth rather than pathology. Through both individualized counseling and the development of informal support groups (Drummet et al., 2003), FLEs could provide military spouses with the tools to increase their positivity ratio, either by increasing positive and/or decreasing negative emotions. Using positive psychology to teach military spouses to dispute negative thinking, prevent rumination, avoid negative circumstances and people, find positive meaning, relish in

good experiences, keep an open mind, and connect with others can arm them with the skills to combat languishing and depression.

The findings of the present study should be considered in light of several limitations. First, the spouses of those deployed to Iraq were not randomly sampled from the population of interest. Rather, they self-selected into the study through their attendance at the Spouse Appreciation Day. It may be that spouses not in attendance at this FRG-sponsored event are suffering from depressive symptoms to a lesser or greater extent; however, the sample of spouses whose Soldiers were deployed to Afghanistan was comprised of spouses that both attended (31%) and did not attend (69%) FRG events. Therefore, the combination of these two samples aided in the alleviation of this limitation. Second, both samples were comprised of spouses of Infantrymen stationed at Fort Hood, Texas, and these results may not generalize to spouses at other military installations or branches. Third, the use of self-report surveys has inherent limitations, such as the potential for inaccurate responses due to lack of self-awareness. Although the anonymity of the surveys enhanced the strength of the study, future research should include objective measures of stress and verifiable measures of depression. Fourth, the response rates of these surveys were unavailable, as the number of spouses in attendance at the Spouse Appreciation Day and who are members of the FRG website were unknown. Because the study was conducted using cross-sectional data, causality cannot be determined. Furthermore, unmeasured variables, such as resilience, may account for some of the observed relationships. Future research should adopt a prospective design to further examine the nature of the predictive and interactive relationships among these

constructs.

Despite these limitations, the implications of this study can be beneficial for the spouses of our military personnel. Military spouses are consistently exposed to numerous stressors that may contribute to the development of psychopathology; however, consistent with the broaden-and-build theory of positive emotions (Fredrickson, 1998; 2001), positive emotions were found to undo, or down-regulate, the negative effects of stress on depressive symptoms. Programs can be implemented that educate spouses with regard to effective ways to increase positivity in order to promote successful adaptation and achieve optimal functioning during times of stress, thereby enhancing not only the well-being of military families but also Soldier readiness and the retention of an experienced military force.

Chapter Five: The role of positive emotions in reducing depressive symptoms among military wives

ABSTRACT

The homecoming period following combat deployment can be as stressful to military spouses as the deployment itself. This study used the broaden-and-build theory of positive emotions to examine whether personal resources (adaptive coping, maladaptive coping, and resilience) mediate the relationship between positive emotions and depressive symptoms in military wives ($n = 252$) following the homecoming of a deployed service member. Using path analysis, after controlling for demographic variables, positive emotions were related to all three personal resources (i.e., positively to adaptive coping and resilience, negatively to maladaptive coping). In turn, adaptive coping and resilience were related to fewer depressive symptoms and maladaptive coping to greater depressive symptoms. The direct path between positive emotions and depressive symptoms was nonsignificant, suggesting complete mediation. The final model accounted for 54% of the total variance in depressive symptoms. Results support the important role that positive emotions play in decreasing depressive symptoms in this high-risk population.

INTRODUCTION

Over two million members of the US Armed Forces have been deployed to the Middle East in support of OEF and OIF since 2001, and more than 40% have deployed more than once (Tan, 2009). In addition to the large number of service men and women

impacted by lengthy conflicts in the Middle East, the families of these service members are also influenced. With 61% of those serving in the active duty military married (Maxfield, 2011), over one million spouses have experienced at least one deployment during the last decade.

Although combat deployments eventually come to an end, war continues to impact the service members who fought in them and their families. Returning service members are moved from the front lines to their front porch in a matter of days. This rapid reentry is the primary reason that 75% of military spouses describe the first three months following homecoming as the most stressful part of deployment (National Military Family Association, 2005; Pincus et al., 2001). Consequently, the majority of military families experience readjustment issues following deployment (Sayers, Farrow, Ross, & Oslin, 2009). These stressors include declines in family organization, cohesion, and nurturance (Kelley, 1994), shifts in family roles and routines, differing expectations regarding parenting and emotional and sexual intimacy (Drummet et al., 2003; Pincus et al., 2001), and the residual psychological and physical injuries associated with war (Drummet et al., 2003; Tollefson, 2008). In addition, military spouses report feeling a loss of autonomy (Drummet et al., 2003), resentment about being “abandoned” (Pincus et al., 2001) and missing important dates (Drummet et al., 2003), withdrawal from support that was beneficial during deployment (Drummet et al., 2003), and increased domestic violence (Sayers et al., 2009).

The inability to successfully manage the demands of military life may be a potential mechanism by which psychopathologies are developed in military spouses, as

the association between stressful life events and the onset of mental disorders is well documented (e.g., Kessler, 1997; Kendler et al., 1999). This is of particular concern, as psychopathologies have been shown to disproportionately affect those married to the military. For example, military wives report a depression prevalence rate of 19% (Mansfield et al., 2010), which is over three times that of their civilian peers (Kessler et al., 2005).

In recent years, the stressors and associated diminished mental health due to deployment have gained attention as contributing factors to the rising divorce rates in military service members. Although the divorce rate in the civilian population has declined since 2001 (Center for Disease Control and Prevention [CDC], 2012), the divorce rate of military service members has steadily increased, reaching an all time high, and surpassing the rate in civilians (Miles, 2008; Tilghman, 2011). It has been suggested that “military deployments have a way of chewing up marriages, turning daily life upside down and making strangers out of husbands and wives” (Alvarez, 2006, p. A1), resulting in the rising rates of divorce in military marriages. Given the considerable stress experienced during the deployment cycle and the increased risk of poor mental health, it seems likely that deployment would be associated with decreased marital quality and increased rates of divorce seen in other stressful life circumstances (e.g., poverty and unemployment; CDC, 2002); however, evidence in military families is mixed, with deployment being found to be both harmful to and protective of the health of marriages (Karney & Crown, 2007).

Not only is the well-being of military spouses important for maintaining a high

level of functioning in the family, it is also vital for the effective functioning of the military. Spouses who are dissatisfied with military life experience decreased psychological well-being (Rosen et al., 1994), and these families have higher attrition rates relative to those who are satisfied with military life (Drummet et al., 2003). Conversely, service members whose spouses are content with military life are more supportive of their career, resulting in increased commitment and re-enlistment (Bourg & Segal, 1999; Pittman et al., 2004). Thus, a spouse's ability to cope with the stressors associated with deployment and reintegration play a critical role in the retention of an experienced military force.

Recent research in the field of positive psychology suggests that positive emotions have significant adaptive value, with higher levels of positive emotions fostering adaptation to adversity (Rioli et al., 2010), protecting against stress (Folkman, 1997), and enhancing health and well-being (Danner et al., 2001; Keyes, 2002; Nelson & Knight, 2010). The way in which positive emotions play an active role in enhancing the psychological well-being has been conceptualized in the broaden-and-build theory of positive emotions (Fredrickson, 1998; 2001). Central to the theory are two complementary hypotheses: the broaden hypothesis and the build hypothesis.

The theory's broaden hypothesis suggests that positive emotions broaden one's thought-action repertoire, thereby expanding an individual's cognitive processes, widening the potential responses that come to mind, and ultimately resulting in more thoughtful decision-making and improved adaptation to adversity. That is, individuals who experience positive emotions have access to a larger repertoire of coping resources

that they can use in creative and flexible ways, which lends itself to better stress management (Zeidner & Saklofske, 1996). Evidence suggests that individuals who often experience positive emotions during stressful situations benefit from their broadened mindset, experiencing sustained coping efforts (Folkman, 1997; 2008), greater use of adaptive coping strategies (Fredrickson & Joiner, 2002; Bonanno et al., 2002), alleviation of stressors, and reduced undesirable outcomes (Folkman & Moskowitz, 2000; Fredrickson, 2001; 2009; Fredrickson et al., 2003). Positive emotions not only provide a “breather” during stressful situations, but also restore depleted personal resources, such as resilience (Folkman, 1997; Lazarus et al., 1980). In the face of stress, resilient individuals experience similar levels of negative emotions, but more positive emotions, than their less resilient peers. This difference in positive emotionality accounts for their increased ability to bounce back from adversity, avoid depression, and thrive (Fredrickson et al., 2003; Ong, Bergeman, Bisconti, & Wallace, 2006; Tugade & Fredrickson, 2004).

These transient positive emotions not only provide broadened outlooks but also allow people to build enduring personal resources, such as enhanced resilience or increased coping self-efficacy. People with an ample supply of these resources are more likely to successfully overcome life’s challenges and take advantage of its opportunities. In turn, these pleasurable encounters then result in increased positive emotions (Garland et al., 2010). This reciprocal relationship underlies the belief that positive emotions initiate an upward spiral. That is, the transient effects of positive emotions accumulate over time. An individual’s broadened thinking triggered by previous positive emotions

facilitates adaptation to adversity, and this successful adaptation helps create future positive emotional experiences. As this cycle continues, individuals build personal resources resulting in enhanced well-being and optimal functioning (Fredrickson & Joiner, 2002; Garland et al., 2010). Empirical evidence supports the build hypothesis, as experiencing more positive emotions has been associated with higher levels of future adaptive coping (Fredrickson & Joiner, 2002) and resilience (Cohn & Fredrickson, 2010; Fredrickson et al., 2008). In turn, this heightened resilience leads to increased life satisfaction (Fredrickson et al., 2008), improved mental health (Cohn & Fredrickson, 2010; Fredrickson et al., 2003), and thriving in the face of tragedy (Fredrickson et al., 2003).

The purpose of this study was to examine whether the presence of positive emotions during deployment predicted whether military wives engaged in adaptive and resilient behaviors and possessed greater psychological well-being after the reunion with their military husband. Based on the broaden-and-build theory of positive emotions, it was hypothesized that: (a) higher levels of positive emotions would be associated with greater adaptive coping and resilience and lower levels of maladaptive coping and depressive symptoms; (b) higher levels of adaptive coping and resilience would be associated with lower levels of depressive symptoms; (c) higher levels of maladaptive coping would be associated with higher levels of depressive symptoms; and (d) adaptive coping, maladaptive coping, and resilience would mediate the relationship between positive emotions and depressive symptoms.

METHOD

Participants and Procedures

Participants consisted of a convenience sample of military wives whose husbands were stationed at Fort Hood, TX and deployed to Afghanistan in support of OEF ($n = 279$). The participants were granted access to an online survey via flyers posted on the FRG password-protected website (<http://www.armyfrg.org>). This website is visited frequently, as it is a primary source of information for spouses of deployed Soldiers. The survey was posted on Survey Monkey, where participants could anonymously respond, during the deployment. To encourage participation, those who completed the survey could choose to enter their email address into a random drawing to win a gift certificate to a local business (valued at \$20). One prize was awarded for every 10 surveys completed, and 93% of participants provided their email address.

A second survey was administered three months following the reunion between the military wife and the deployed service member. This survey was also administered online via Survey Monkey, which participants were granted access to via the password-protected FRG website (<http://www.armyfrg.org>). Participants in the second survey ($n = 268$) could enter their email address into a random drawing, with one gift certificate (valued at \$20) awarded for every 10 surveys completed. Ninety percent of participants provided their email address.

Participants in both the deployment and reunion surveys were asked to provide their mother's maiden name, including first initial. This information was used to match individuals who completed both surveys while maintaining the anonymity of participants.

The final sample included 252 military wives, which represents a 90% response rate from the initial sample. There were no differences between those who completed both surveys ($N = 252$) and those in the deployment sample who did not participate in the reunion survey ($n = 27$) on any variables measured on the deployment survey ($p > .05$).

Measures – Deployment Survey

Demographics

Participants were asked to report personal characteristics, including age, race, education level, employment status, length of marriage, marital satisfaction, number of children, husband's rank, and total number of deployments experienced. Number of deployments, length of marriage, marital satisfaction, and age were retained as continuous variables. Marital satisfaction was measured on a 10-point Likert scale from 1 (*very unsatisfied*) to 10 (*very satisfied*). Categorical demographic variables were dichotomized based on conceptual relevance: spousal rank (0 = *junior enlisted*, 1 = *noncommissioned and commissioned officers*), race (0 = *Caucasian*, 1 = *Minority*), education (0 = *no college degree*, 1 = *college degree obtained*), employed (0 = *unemployed*, 1 = *employed*), and children (0 = *no children*, 1 = *has children*).

Positive Emotions

Positive emotions were measured using the 10-item subscale of the PANAS (Watson et al., 1988). On a Likert scale from 1 (*not at all*) to 5 (*very much so*), participants indicated to what extent they generally experienced various positive

emotions, such as “excited,” “enthusiastic,” “inspired,” and “interested.” Reliability was strong ($\alpha = .90$) and corresponded well to the initial psychometric work ($\alpha = .88$; Watson et al., 1988).

Measures – Reunion Survey

Coping Strategies

Adaptive coping strategies were assessed by the Brief Coping Orientations to Problems Experienced Scale (Brief COPE; Carver, 1997). The Brief COPE measures a broad range of behavioral and cognitive coping strategies that individuals typically use during stressful situations. Participants were asked to what extent they utilized specific coping strategies during the past month on a 4-point Likert scale ranging from 1 (*never*) to 4 (*regularly*). Two scores were derived from the Brief COPE: (a) a summed score of coping strategies typically identified as adaptive (acceptance, active coping, planning, positive reframing, using emotional support, and using instrumental support); and (b) a summed score of coping strategies typically identified as maladaptive (behavioral disengagement, denial, self-blame, self-distraction, substance use, and venting of emotions). The adaptive and maladaptive coping scores had good levels of reliability (adaptive coping, 12 items, $\alpha = .86$; maladaptive coping, 12 items, $\alpha = .79$).

Resilience

Resilience was measured by the 25-item Connor-Davidson Resilience Scale (CD-RISC; Connor & Davidson, 2003). The CD-RISC identifies characteristics that enable

individuals to successfully adapt to stress, such as faith, goal setting, humor, patience, and tolerance of negative affect, as well as the ability to make commitments and take control of challenges. Participants responded how they generally felt since being reunited with their spouse on a 5-point Likert scale ranging from 0 (*not true at all*) to 4 (*always true*). A resilience score was calculated as the sum of all items, with higher scores indicating greater resilience. Sample items included: “I believed I could achieve my goals, even if there were obstacles” and “Under pressure, I stay focused and think clearly.” Reliability of the CD-RISC was strong ($\alpha = .89$) and corresponded to the reliability in general population samples used during scale development ($\alpha = .89$; Connor & Davidson, 2003).

Depressive Symptoms

The 20-item CES-D (Radloff, 1977) was used to measure depressive symptoms experienced during the past week, such as depressed mood, feelings of guilt, worthlessness, helplessness, and restless sleep. Sample items included: “I was bothered by things that usually don’t bother me” and “I felt everything I did was an effort.” Responses ranged from 0 (*rarely or none of the time; less than one day*) to 3 (*most or all of the time, 5-7 days*), and were summed for a total score. A CES-D score of 16 or greater is considered a moderately severe level of depressive symptoms. Reliability of the CES-D was strong ($\alpha = .87$) and comparable to the reliability in general populations used during the development of the scale ($\alpha = .85$; Radloff, 1977).

Statistical Analyses

Structural equation modeling was used to test the hypothesized path model using Mplus (Version 6.12; Muthén & Muthén, 1998-2010). We tested whether higher levels of positive emotions led to decreased depressive symptoms mediated by the three personal resources (adaptive coping, maladaptive coping, and resilience), after controlling for baseline demographic variables. Given the relatively small sample size and the non-normality of datasets in the behavioral sciences, the maximum likelihood parameter estimate with robust standard errors (MLR) was used (Muthén & Muthén, 1998-2010).

Central to the use of structural equation modeling is the assessment of fit between the hypothesized model and the actual data. Based on the recommendations of Hu & Bentler (1999), the following model fit indices were used to examine how well the model fits the data, with their recommended standards in parentheses. The χ^2 , which is not significant when the model fit is good. The incremental indices were the Tucker-Lewis Index [TLI ($\geq .95$)] and the Comparative Fit Index [CFI ($\geq .95$)]. The TLI adjusts for model complexity by considering the number of estimated parameters in the model, whereas the CFI adjusts for the issues of sample size inherent in the χ^2 test of model fit. The absolute indices were the Standardized Root Mean Square Residual [SRMR ($\leq .08$)] and the Root Mean Squared Error of Approximation [RMSEA ($\leq .06$)]. The SRMR describes the standardized difference between the observed correlations and the

correlations predicted by the model. The RMSEA assesses how well the model with optimally chosen parameters would fit the population covariance matrix were it available.

RESULTS

Descriptive Statistics

Table 5.1 displays the correlations, means, standard deviations, and range values for all variables. The majority of participants were married to junior enlisted Soldiers (60%), followed by noncommissioned officers (31%) and commissioned officers (9%). Participants had experienced an average of two deployments, with the number of deployments ranging from one to four. Participants ranged in age from 19 to 39, with a mean age of 25 (± 3.63) years. The majority were Caucasian (66%), followed by Hispanic/Latino (17%), African American (13%), Asian (2%), and other (2%). With regard to education, 1% had a post-graduate degree, 26% had a Bachelor's Degree, 5% had an Associate's Degree, 56% had some college, and 12% had a high school diploma/GED. Participants were married an average of four years, 84% had children, with approximately two children per household, and 22% were employed. Based on recent demographic data, the current sample appears to be representative of the target population with respect to spousal rank, age, race, and number of children (Maxfield, 2011).

Positive emotions had a positive correlation with adaptive coping and resilience and a negative correlation with maladaptive coping and depressive symptoms. With regard to the control variables, wives of officers and those who had experienced more deployments

reported higher levels of positive emotions, adaptive coping, and resilience and lower levels of maladaptive coping and depressive symptoms. Similar correlations were found for wives who had been married longer and reported greater marital satisfaction (see Table 5.1).

Table 5.1. Correlations among military wives' positive emotions, personal resources, depressive symptoms, and demographics

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1. Positive Emotions	--												
2. Adaptive Coping	.70**	--											
3. Maladaptive Coping	-.53**	-.26**	--										
4. Resilience	.41**	.47**	-.47**	--									
5. Depressive Symptoms	-.68**	-.62**	.56**	-.74**	--								
6. Number of Deployments	.27**	.18**	-.26**	.32**	-.34**	--							
7. Spousal Rank [†]	.24**	.23**	-.24**	.54**	-.30**	.40**	--						
8. Length of Marriage	.27**	.18**	-.29**	.33**	-.30**	.70**	.50**	--					
9. Marital Satisfaction	.35**	.33**	-.49**	.60**	-.51**	.28**	.50**	.31**	--				
10. Age	.34**	.23**	-.31**	.40**	-.38**	.78**	.54**	.90**	.41**	--			
11. Race [†]	.14*	.15*	-.07	.03	-.06	.03	.06	.01	-.04	.01	--		
12. Education [†]	.11	.09	-.13*	.14*	-.15*	.09	.20**	-.02	.31**	.20**	.07	--	
13. Employed [†]	-.07	-.02	.15*	-.18**	.18**	-.36**	-.20**	-.39**	-.18**	-.41**	.03	.08	--
14. Children [†]	.02	.00	-.08	.16*	-.14*	.35**	.11	.34	.06	.36**	.09	.00	-.65**
Mean	22.20	34.62	30.77	74.01	15.55	1.86	--	4.11	7.54	25.39	--	--	--
Standard Deviation	9.84	5.13	3.90	11.71	10.65	.69	--	3.28	1.64	3.63	--	--	--
Minimum	10	19	18	29	3	1	--	1	2	19	--	--	--
Maximum	50	47	44	97	49	4	--	18	10	39	--	--	--

*** $p < .001$, ** $p < .01$, * $p < .05$

[†]Spousal Rank (0 = junior enlisted, 1 = noncommissioned and commissioned officer), Race (0 = Caucasian, 1 = Minority), Education (0 = no college degree, 1 = college degree obtained), Employed (0 = unemployed, 1 = employed), and Children (0 = no children, 1 = has children)

Note: Correlations between continuous variables are Pearson, whereas those including dichotomized variables are point-biserial

Path Analysis

The test of the overall fit for the hypothesized model in Figure 5.1 suggests that the model fit the data well ($\chi^2 = 49.886, p = .06$). Further, the absolute (RMSEA = .048, SRMR = .038) and incremental (CFI = .979, TLI = .959) fit indices all suggest the model was an acceptable fit for the data.

With regard to the demographic variables, only marital satisfaction was significantly related to positive emotions, with higher marital satisfaction resulting in more positive emotions experienced ($\beta = .26, p < .001$). In terms of the direct effects, military wives who experienced more positive emotions reported more adaptive coping ($\beta = .72, p < .001$) and resilience ($\beta = .19, p < .001$) and less maladaptive coping ($\beta = -.37, p < .001$). Of the three personal resources, adaptive coping ($\beta = -.54, p < .001$) and resilience ($\beta = -.33, p < .001$) were negatively related to depressive symptoms, whereas maladaptive coping ($\beta = .15, p < .01$) had a moderate positive relationship with depressive symptoms. The direct path between positive emotions and depressive symptoms was nonsignificant ($\beta = -.04, p = .45$), suggesting a fully mediated model.

In terms of the indirect effect of positive emotions on depressive symptoms, the indirect effect via adaptive coping ($\beta = -.37, p < .001$) was large and negative, whereas the indirect effects via maladaptive coping ($\beta = -.08, p < .05$) and resilience ($\beta = -.13, p < .01$) were small to moderate and negative. Pairwise comparisons of the three indirect effects indicate that the mediating effect of adaptive coping was stronger than the mediating effects of maladaptive coping and resilience. Taking together the direct and

indirect effects, the total effect of positive emotions on depressive symptoms was strong and negative ($\beta = -.63, p < .001$). The model accounted for 54% of the total variance in depressive symptoms.

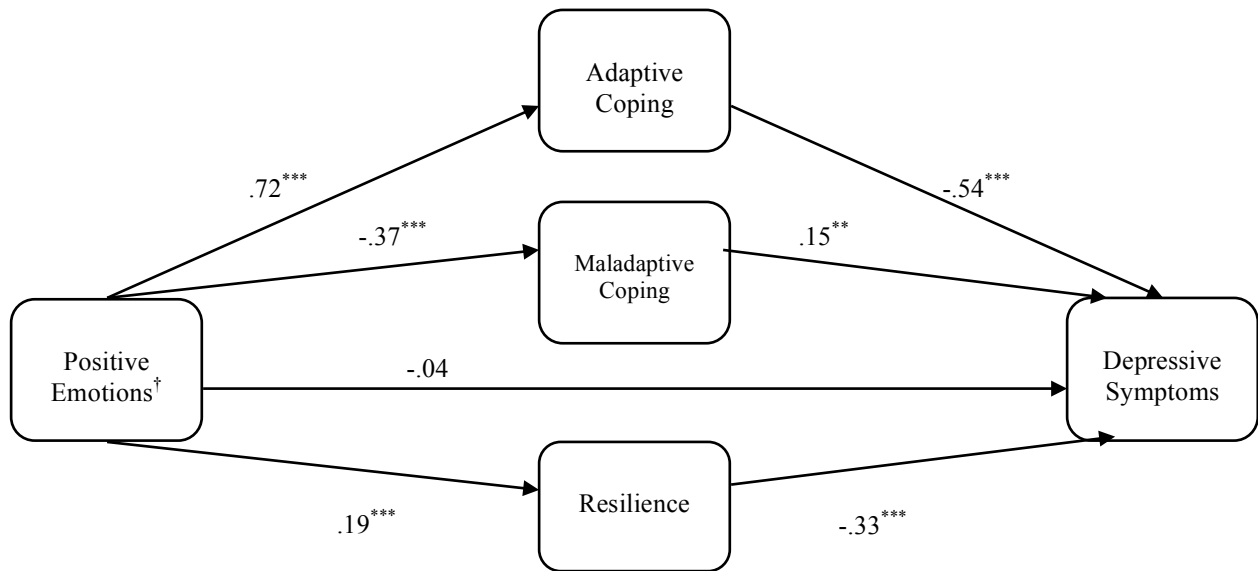


Figure 5.1: Path analysis of the relationship between positive emotions and depressive symptoms and the mediating role of personal resources in military wives.

Note: Standardized parameter estimates are shown.

$\chi^2 = 49.886, p = .06$; RMSEA = .048; SRMR = .038; CFI = .979; TLI = .959

† Controlling for Number of Deployments, Spousal Rank, Length of Marriage, Marital Satisfaction, Age, Race, Education, Employed, and Children.

* $p < .05$, ** $p < .01$, *** $p < .001$

DISCUSSION

This study used the broaden-and-build theory of positive emotions (Fredrickson, 1998; 2001) as a guide to examine the ability of positive emotions during deployment to enhance personal resources and reduce depressive symptoms in military wives after the reunion with a deployed spouse. As hypothesized, adaptive coping, maladaptive coping, and resilience mediated the relationship between positive emotions and depressive symptoms. These results provide support for Fredrickson's build hypothesis that positive emotions facilitate the building of personal resources, which then results in an improved level of functioning.

Military wives who experienced more positive emotions during deployment experienced fewer depressive symptoms during reunion not because of the euphoria of positive emotions, but because they built resources to effectively deal with the stressors of reunion. This is supported by the finding that adaptive coping, maladaptive coping, and resilience completely mediated the relationship between positive emotions and depressive symptoms. Of these resources, adaptive coping was shown to be the most influential. Individuals who experience positive emotions tend to be more creative, curious, flexible, and open to new ideas and experiences (e.g., Kahn & Isen, 1993; Rowe et al., 2007). These tendencies facilitate adaptive coping strategies, such as positive reframing and problem solving. An optimistic approach to life requires the expectation that good outcomes require some effort; thus, it seems reasonable to expect positive emotions would be positively associated with adaptive strategies such as planning and positive reframing and negatively associated with maladaptive strategies such as

avoidance and disengagement (Carver & Connor-Smith, 2010; Connor-Smith & Flachsbart, 2007).

Another benefit of positive emotions is an increased orientation towards others (Cohn & Fredrickson, 2006; Waugh & Fredrickson, 2006). Consequently, access to a social network should facilitate the use of emotional and instrumental support (Carver & Connor-Smith, 2010). Military spouses can seek social support both from formal (e.g., military sponsored organizations) and informal (e.g., friends, family, and religious groups) networks (Bowen et al., 2003). One formal support network that is available to military spouses is FRGs, which are command-sponsored organizations that aim to maintain clear communication channels between the unit and families, increase the resiliency and readiness of service members and their families, and provide tools to facilitate adjustment to the military lifestyle (Department of the Army, 2010). The FRG website is widely utilized because it is the primary source of information for military spouses, but only 25% of enlisted wives attend the in-person FRG meetings (Drummet et al., 2003).

In response to the limited use of formal networks like the FRG, Drummet and colleagues (2003) have recommended the military adopt a lay health model and develop Family Life Educators (FLEs) to “strengthen and enrich individual and family well-being” (Arcus et al., 1993, p. 5). Focused on prevention rather than crisis management, FLEs emphasize education and growth through the use of individualized counseling and informal support networks (Drummet et al., 2003). Using positive psychology to teach military wives to dispute negative thinking, eliminate rumination, find positive meaning,

keep an open mind, and connect with others, FLEs could equip them with the skills to combat depression and thrive.

An important finding to note is that higher marital satisfaction was related to more positive emotions. While the directionality of this relationship is unclear due to the assessment of both positive emotions and marital satisfaction at the same time point, this relationship highlights the importance of the spouses' positive emotions in improving military marriages. With divorce rates on the rise, a number of military-based and non-profit programs have taken aim at saving military marriages (Miles, 2008). Intended to strengthen the military by strengthening marriages, these programs may benefit from considering the emotional state of spouses in their trainings. This is supported by previous research, which suggests individuals that experience positive emotions report greater marital satisfaction and fewer divorces 30 years later (Harker & Keltner, 2001).

While the current study was conducted with military wives, these results could extend to any marriage and the stressors they may face. This study assessed a high-risk population during what could arguably be the most stressful experience in their marriage. Further, a number of demographic variables, including age, race, education level, employment status, number of children, and spousal rank, which is commonly used to reflect the socioeconomic status of military families, were controlled for. Thus, the results from this study demonstrate the potential of positive emotions to build personal resources and decrease depressive symptoms in the face of a highly stressful event regardless of demographic differences between wives. Future research should examine this model in civilian samples, as the modern marriage differs from the unique military

family structures (i.e., the husband is committed to work, while the wife is responsible for the home and child-rearing).

This study is limited in that it utilized a convenience sample of military spouses that were stationed at Fort Hood, Texas, and thus, findings may not readily generalize to spouses at other military installations or branches. While the retention of participants between the initial and follow-up surveys (90%) was quite high, the overall response rate is unavailable, as the number of spouses who were members of the FRG website are unknown. Another limitation of the study is the use of self-report surveys. Several measures used in this study, however, have high validity (Connor & Davidson, 2003; Radloff, 1977; Watson et al., 1988) and correlate well with observer reports (Radloff, 1977). Nonetheless, future studies should incorporate objective measures. Finally, the analyses of this study were limited by the pre-post nature of the study. Consequently, growth in positive emotions or personal resources between deployment and reunion with the spouse could not be modeled; however, the directions of the current model have been established by prior longitudinal studies with greater data collection frequency (Cohn & Fredrickson, 2010; Fredrickson et al., 2008).

The ability of positive emotions to decrease depressive symptoms by way of enhancing adaptive coping and resilience and decreasing maladaptive coping is important for the well-being of the military spouse. In the present study, nearly one-third of the military spouses reported a moderately severe level of depressive symptoms, indicated by a CES-D score of greater than 16 (Radloff, 1977). The high proportion of military spouses experiencing clinically significant depressive symptoms supports previously

reported high rates of psychopathology in military spouses (Dimiceli et al., 2010; Mansfield et al., 2010) and threatens not only the health of the individual, but also the health of the marriage (Fredrickson, 2009).

The results of the current study have important implications not only for military spouses, but also for other highly stressed marriages and families. Consistent with the broaden-and-build theory of positive emotions, the experience of positive emotions was found to be associated with decreased depressive symptoms due to greater use of more adaptive and resilient behaviors. Programs can be implemented that educate spouses with regard to effective ways to increase positive emotions in order to promote successful adaptation and achieve optimal functioning during times of stress.

Chapter Six: Conclusions

The first aim of this dissertation was to establish the effect that deployment has on the psychological well-being of military spouses. In addition, the broaden-and-build theory was used as a framework to determine the utility of positive emotions in undoing the negative effects of stress, broadening the adaptive and resilient behaviors that come to mind, and building psychological well-being in military spouses. In order to achieve these aims, three studies were conducted: (a) a meta-analytic review was performed on the existing literature to determine the magnitude and direction of the effect of deployment on psychological well-being; (b) a cross-sectional examination of the ability of positivity to moderate the relationship between stress and depressive symptoms; and (c) a longitudinal analysis of the mediating roles of personal resources in the relationship between positive emotions and depressive symptoms. The findings from the three studies of this dissertation confirm the existence of a detrimental effect of deployment on military spouses and indicate that positive emotions play an important role in protecting spouses from this effect. The key findings, limitations, and implications for future research and practice are discussed below.

SUMMARY OF KEY FINDINGS

A primary goal of this dissertation was to determine whether deployment had a positive, negative, or no effect on the well-being of military spouses. It was hypothesized that deployment would have a positive effect on psychological well-being, such that military spouses experienced more psychological problems during deployment. Further, it was hypothesized that the effect sizes would vary by sample (e.g., age), deployment

(e.g., branch, conflict, and length of deployment), and study characteristics (e.g., control type).

As expected, a meta-analytic review of the existing literature found that deployment had a moderate positive effect on spouses' psychological well-being. Specifically, military spouses reported higher levels of anxiety, depression, and stress, among other psychopathologies, during deployment. Results for health complaints were in the predicted direction but not statistically significant, while deployment appeared to have no effect on psychological status.

Although analyses indicated that the results reported by the studies in this meta-analysis varied, moderator tests were unable to identify sample (e.g., age) or deployment (e.g., branch, conflict, and length of deployment) characteristics that influenced deployment's effect on spouse psychological well-being. However, study design was found to moderate the relationship, with larger effects being reported by studies using a pre-deployment control compared to a non-deployed military control. This finding suggests that the effect of deployment on military spouses may actually be larger than the more commonly used cross-sectional designs indicate. During OEF and OIF, the conflicts during which 75% of the included studies were conducted, the dwell time between deployments was frequently limited to period of time less than a year (Tanielian & Jaycox, 2008). Thus, non-deployed military families were often experiencing the stressors associated with pre-deployment training and homecoming. Consequently, the position of the non-deployed controls within the deployment cycle (i.e., whether their service member was preparing to deploy or had recently returned) should be considered, though this information has historically been omitted in the literature.

Consistent with the findings of this meta-analysis and confirming what previous studies have found (Dimiceli et al., 2010), the second study in this dissertation found that

39% of military spouses reported a clinically significant level of depressive symptoms during deployment. Further, 19% reported a positivity ratio below 1.0, suggesting clinical depression. This high proportion of military spouses who are “depressed” is cause for concern, as their symptomology and low positivity ratios are threatening to the health of individual spouses, military marriages, and the Armed Forces (Drummet et al., 2003; Fredrickson, 2009).

Positivity was found to moderate the relationship between stress and depressive symptoms, such that the less positivity a spouse reported the stronger the relationship between stress and depressive symptoms. The finding that positivity moderated the relationship between stress and depressive symptoms supports Fredrickson’s undoing hypothesis that positive emotions down-regulate the negative effects of stress (Fredrickson et al., 2000). Further, military spouses who were flourishing remained well below the CES-D criterion even at high levels of stress, while wives who reported languishing or depressed levels of positivity exceeded the criterion. This finding provides support for the mathematical model developed by Fredrickson and Losada (2005) using a population facing a highly-stressful experience.

The broaden-and-build theory of positive emotions proposes that positive emotions broaden the actions, perceptions, and social connections that come to mind (Fredrickson, 1998; 2001). In support of this, the third study found higher levels of positive emotions were associated with higher levels of adaptive coping and resilience and lower levels of maladaptive coping during deployment. Greater use of adaptive and resilient behaviors then predicted lower levels of depressive symptoms following reunion. In fact, the relationship between positive emotions and depressive symptoms was completely mediated by adaptive coping, maladaptive coping, and resilience. Military wives who experienced more positive emotions during deployment experienced

fewer depressive symptoms during reunion not merely because they felt positive, but because they built resources to effectively deal with the stressors of reunion. This finding identifies the mechanism by which positive emotions enhance well-being through the building of adaptive and resilient behaviors.

LIMITATIONS

The findings of this dissertation, while important, are not without limitations. While one of the strengths of this dissertation was the fairly large and diverse sample of military spouses, the first set of limitations concerns the study sample. In particular, this dissertation only utilized data from military wives. Females comprise 16% of the total Army (Maxfield, 2011), and differences in the effects of deployment and the utility of positive emotions may differ for males who are married to service members, especially given their minority status. In addition, the second and third studies utilized a convenience sample of military wives married to active duty US Army Infantrymen stationed at Fort Hood, Texas. Thus, these findings may not generalize to reservists, other military branches, occupational specialties, or installations. Finally, the response rates were unknown, as the number of spouses who went to the Spouse Appreciation Day and were members of the vFRG website were unavailable.

There were also limitations related to study design that should be noted. With regard to the meta-analysis, many of the included studies were cross-sectional and cannot determine causality in the relationship between deployment and spousal well-being. The inability to determine causality due to cross-sectional design also extends to the second study. Another study design limitation is the use of self-report surveys in the second and third study, though numerous studies reported high validity and correlation with observer reports (Connor & Davidson, 2003; Radloff, 1977; Watson et al., 1988). Finally, the

meta-analysis performed in the first study was limited due to the small sample size and inconsistent reporting of relevant moderators in the existing literature (e.g., combat intensity).

IMPLICATIONS FOR FUTURE RESEARCH AND PRACTICE

Despite these limitations, there are a number of implications for future research based on the findings of this dissertation. First, the analyses should be replicated with study samples that include males married to service members, as well as greater diversity with regard to active duty or reservist status, branch, and occupational specialty. Second, the results from the first study highlighted potential differences in the effect of deployment depending on whether a cross-sectional or longitudinal design was adopted, despite only 25% of studies using a longitudinal design. This finding highlights the need for additional longitudinal research. Third, the results from the third study suggest that positive emotions build personal adaptive and resilience resources, though this finding is limited by data collection methodology. Future research should perform longitudinal studies that measure changes in positive emotions, personal resources, and well-being to better develop the broadening and building roles of positive emotions.

The results from the first study of this dissertation suggest that deployment poses a significant threat to the health of military spouses. As a response to this, studies two and three highlight the importance of experiencing positive emotions in military spouses. The ability of positive emotions to protect against stress, increase adaptive and resilient behaviors, and enhance well-being carries important implications for interventionists. Programs should be designed for military spouses, similar to those in place for service members (i.e., Comprehensive Soldier Fitness), that focus on harnessing positivity in order to promote successful adaptation and functioning during times of stress.

CONCLUSIONS

Taken together, the results of these three studies highlight the detrimental effect of deployment on military spouses, while beginning to explore factors that may buffer deployment's effect. Further, these results provide support for the undoing, broadening, and building hypotheses of the broaden-and-build theory of positive emotions using a highly stressed population during potentially one of the most stressful periods of their lives. Future research should examine the efficacy of programs designed to increase positive emotions in military spouses, as this type of program might promote successful adaptation and achievement of optimal functioning during times of stress.

Appendix A: Meta-Analysis Coding Guide

Background	
B1. What is the Study ID number?	____ _
B2. What was the first author's last name?	_____
B3. What was the year of appearance of the report or publication?	____ _
B4. What was the type of publication? 1 = journal article 2 = book chapter 3 = book 4 = dissertation 5 = MA thesis 6 = private report 7 = government report (state or federal) 8 = school or district report 9 = conference paper 10 = other (specify _____)	____ _

Characteristics of Deployment	
<p>D1. Were the following details about the deployment available in the report (or retrievable elsewhere)?</p> <p>a. What was the location of the service member's deployment?</p> <p>b. What was the name of the conflict?</p> <p>c. How long was the service member deployed (in months)?</p> <p>d. Was the deployment a combat or peacekeeping mission?</p> <p>e. How many deployments had the service members experienced prior to the current deployment?</p> <p>f. Was danger of deployment assessed?</p>	<p>1 = Afghanistan 2 = Bosnia 3 = Egypt 4 = Iraq 5 = Korea 6 = Kuwait 7 = Liberia 8 = Libya 9 = Philippines 10 = Somalia 11 = Yemen 12 = Other: _____ 99 = Not Available</p> <p>_____</p> <p>_____</p> <p>1 = Combat 2 = Peacekeeping 99 = Not Available</p> <p>_____</p> <p>1 = yes 2 = no</p> <p>If yes, how was it assessed? _____</p>

g. What rank were the majority of service members at the time of deployment?	1 = Junior Enlisted 2 = Enlisted 3 = Non-Commissioned Officer 4 = Commissioned Officer 5 = Other _____ 99 = Not Available
h. What branch of the military were the service members in?	1 = Army 2 = Navy 3 = Marines 4 = Air Force 5 = Other 99 = Not Available

Sample Level Codes	
S1. What is this sample's ID number?	___ _
S2. Location of study: a. United States b. Canada c. Europe d. Asia e. Other (specify:_____)	0 = no 1 = yes 99 =NR 0 = no 1 = yes 99 =NR 0 = no 1 = yes 99 =NR 0 = no 1 = yes 99 =NR 0 = no 1 = yes 99 =NR
S3. Were participants? a. Spouses b. Partners	0 = no 1 = yes 99 =NR 0 = no 1 = yes 99 =NR
S4. Average age of participants	_____
S5. What sexes were represented in the sample?	1 = males 2 = females 3 = both 99 = Not Available

a. What was the proportion of females in the sample?	_____
<p>S6. What ethnicities were represented in the sample?</p> <p>a. Caucasian/European American 0 = no 1 = yes 99=NR</p> <p>b. Black/African American 0 = no 1 = yes 99=NR</p> <p>c. Asian-American 0 = no 1 = yes 99=NR</p> <p>d. Hispanic 0 = no 1 = yes 99=NR</p> <p>e. Native American 0 = no 1 = yes 99=NR</p> <p>f. Other (specify _____) 0 = no 1 = yes 99=NR</p> <p>g. Not specified 0 = no 1 = yes 99=NR</p>	
S7. What proportion of the sample was employed outside the home?	_____
<p>S8. What proportion of the sample had children?</p> <p>_____</p> <p>a. Average number of children per participant?</p> <p>_____</p>	
S9. What was the average length of marriage?	_____
S10. What was the marital satisfaction level?	_____

Research Design Level Codes	
R1. What was the research design?	1 = Single group, pre-post design 2 = Single group, standardized norms for instrument 3 = Two group, deployed and non-deployed military control 4 = Two group, deployed and non-deployed civilian control 5 = Other: _____

Outcome Level Codes	
O1. How was the outcome measured?	1 = Continuous Variable 2 = Grouping Variable
O2. What type of outcome measure is this? 1 = anxiety 2 = depression 3 = stress 4 = physical health 5 = other: _____ 99 = could not determine	____ ____ Describe measure: _____
O3. What type of outcome measure is this? 1 = validated scale 2 = experimenter-created scale 3 = single-item 4 = behavioral measure 99 = could not determine	____ ____
O7. Was evidence presented regarding the internal consistency of this measure? O7a. If an internal consistency estimate was reported, what was it?	0 = no 1 = yes 99 =NR . ____ ____

Outcome Level Codes	
O8. When was the outcome measured (circle all that apply)?	0 = Before Deployment 1 = During Deployment 2 = Post Deployment 99 = Not Available
O10. What was the sample size for the deployed group for the analysis of this outcome measure?	____ ____ ____ ____ ____
O11. What was the sample size for the comparison group for the analysis of this outcome measure?	____ ____ ____ ____ ____
O12. Could the direction of the effect size be identified for this outcome measure? O12a. If yes, what was the direction?	0 = no 1 = yes -1 = comparison group had higher psychosocial issues than the deployed group 0 = there was exactly no difference between the groups +1 = deployed group had higher psychosocial issues than the comparison group
O13. Could an effect size be derived for this outcome measure? O13a. If yes, what was the effect size?	0 = no 1 = yes $d =$ ____ ____ . ____ ____ $r =$ 0. ____ ____ $\beta =$ ____ ____ . ____ ____ <i>Total Sample</i> Pre-deployment M: _____, SD: _____ Deployment M: _____, SD: _____ Total N: _____ <i>When groups based on deployment status were used</i> M: _____ Group: _____ M: _____ Group: _____ SD: _____ Group: _____ SD: _____ Group: _____ N: _____ Group: _____ N: _____ Group: _____ Ind. t: _____ Comparison: _____ F: _____ Comparison: _____

Outcome Level Codes	
O13b. What is the page number that the effect size is located on?	_____
<p>O14. If an effect size could be derived, how could it be done?</p> <p>(Note. Choose only one derivation procedure. They are listed in order of preference.)</p> <ol style="list-style-type: none"> 1. Standard formula (Note: The standard formula for the d-index is the difference between the choice and comparison group means divided by the pooled standard deviation) 2. Algebraic equivalent of standard formula (Note: This could be a transformation of a t-test, univariate F-test, correlation, or chi-square.) 3. Algebraic equivalent of standard formula with imprecise information (e.g., used $p < .05$ to generate an effect size) 4. Nonstandard formula 5. No effect size could be derived 	_____
O15. For this outcome, were scores roughly normally distributed within groups?	0 = no 1 = yes NR
O16. For this outcome, were variances roughly equivalent across groups (ratio of variances no greater than 3:1)?	0 = no 1 = yes NR

Appendix B: Support Letter



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
REAR DETACHMENT, 2ND BATTALION 2ND INFANTRY
3RD BCT, 1ST INFANTRY DIVISION
FORT HOOD TX, 76544



21 APRIL 2009

Katie Faulk
The University of Texas at Austin
Department of KHE
Bellmont Hall 222
Austin, TX 78712

Dear Katie Faulk,

This letter is to confirm that you have permission to make your research surveys available to spouses of active duty servicemen in the Army's Third Brigade, First Infantry Division using the Virtual Family Readiness Group website (www.armyfrg.org).

Sincerely,

A handwritten signature in black ink, appearing to read "SHANE D. FOSHEE".

SHANE D. FOSHEE
1LT, IN
Commanding

Appendix C: Deployment Survey Recruitment Flyer

WANTED

3/I ARMY WIVES



We are looking for wives of Soldiers from the Third Brigade, First Infantry Division to take a survey regarding the experiences of military spouses during deployment. The survey takes approximately 20-30 minutes and all responses are anonymous.

CLICK [HERE](#) TO TAKE THE SURVEY

REWARD

You could win one of 50 gift cards to Wal-Mart or AAFES (valued at \$20) or 2 footballs or 2 basketballs autographed by the head coaches of The University of Texas teams (valued at \$99).

Appendix D: Deployment Cover Letter

Dear Military Spouse,

I am a military spouse and graduate student at The University of Texas at Austin. As such, I am interested in learning more about the experiences of military spouses and how they cope with the many stressful situations that they face while their husbands are deployed.

The survey takes approximately 20-30 minutes to complete. All of your responses will be strictly anonymous and the records of this study will be stored securely. Your responses can in no way be linked to your identity. Your decision to participate or not will not affect your present or future relationship with The University of Texas at Austin or the United States Army. Although participation is voluntary, we feel that your responses are very important in increasing the understanding of the impact that military lifestyle has on spouses.

In an effort to thank you for your time, you may choose to be entered into a drawing for one of many prizes following your completion of the survey. The prizes include 50 gift certificates to Wal-Mart and AAFES (valued at \$20 each) and autographed memorabilia from The University of Texas football and basketball teams (2 footballs and 2 basketballs valued at \$99 each).

If you have any questions, please do not hesitate to contact us by phone or email: katiefaulk@mail.utexas.edu at (503) 860-2237, or msteinhardt@mail.utexas.edu at (512) 232-3535. If you have questions about your rights as a research participant, complaints, concerns, or questions about the research please contact Jody Jensen, Ph.D., Chair, The University of Texas at Austin Institutional Review Board for the Protection of Human Subjects at (512) 232-2685 or the Office of Research Support at (512) 471-8871 or email: orpsc@uts.cc.utexas.edu. Thank you in advance for your time and cooperation in participating in this important study.

Sincerely,

Katie Faulk, BS, BA
Masters Candidate
Department of Kinesiology and Health Education

Mary Steinhardt, EdD, LPC
Professor and Faculty Advisor
Department of Kinesiology and Health Education

Appendix E: Deployment Survey Items

Deployed Spouse Survey	
3.	
1. What is your age?	
<input type="text"/>	
2. What is your gender?	
<input type="radio"/> Male	
<input type="radio"/> Female	
3. What is your race?	
<input type="radio"/> White	
<input type="radio"/> Black/African American	
<input type="radio"/> Hispanic/Latino	
<input type="radio"/> American Indian	
<input type="radio"/> Pacific Islander	
<input type="radio"/> Asian	
<input type="radio"/> Other (please specify)	
<input type="text"/>	
4. What is the highest grade you have completed in school?	
<input type="radio"/> Elementary School	<input type="radio"/> Some College
<input type="radio"/> Junior High/Middle School	<input type="radio"/> Associate's Degree
<input type="radio"/> Some High School	<input type="radio"/> Bachelor's Degree
<input type="radio"/> High School	<input type="radio"/> Post-Graduate
5. What is your occupation?	
<input type="text"/>	
6. Where is your primary residence?	
<input type="radio"/> On-Post Housing	
<input type="radio"/> Off-Post House	
<input type="radio"/> Off-Post Apartment	
<input type="radio"/> Other (please specify)	
<input type="text"/>	

Deployed Spouse Survey

7. Do you have children?

- ☐ Yes
- ☐ No
- ☐ Expecting

If yes, how old?

8. How long have you been married?

9. How long have you been a military spouse?

10. How satisfied are you with your marriage?

	Very Unsatisfied											Very Satisfied
Marital Satisfaction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11. What is your spouse's rank?

12. What is your spouse's Military Occupation Specialty (MOS)?

13. What is your spouse's status?

- ☐ Active Duty
- ☐ Reservist
- ☐ National Guard

14. What is your spouse's Estimated Time of Separation (ETS) date (MM/YYYY)?

15. Does your spouse plan to reenlist?

- ☐ Yes
- ☐ No
- ☐ Unsure

16. How many times has your spouse been deployed (including this deployment)?

17. When did your spouse deploy for the current deployment (MM/YYYY)?

18. When do you expect your spouse to return (MM/YYYY)?

Deployed Spouse Survey

19. How dangerous do you perceive your spouse's location to be?

	Not Dangerous									Very Dangerous
Level of Danger	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

20. How do you communicate with your spouse (select all that apply)?

- ☐ Video (Webcam, Video Teleconference, etc.)
- ☐ Telephone
- ☐ E-mail
- ☐ Letters
- ☐ Other (please specify)

21. How frequently do you communicate with your spouse?

- ☐ Daily
- ☐ Weekly
- ☐ Monthly
- ☐ Sporadically
- ☐ Never

Deployed Spouse Survey

4.

1. Do you attend Family Readiness Group (FRG) meetings and events?

☐ Yes

☐ No

2. How often do you attend Family Readiness Group (FRG) meetings and events?

	Never									Always
Frequency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. What do you like best about the Family Readiness Group (FRG)?

	<input type="text"/>	<input type="button" value="Up"/>
	<input type="text"/>	<input type="button" value="Down"/>

4. What do you like least about the Family Readiness Group (FRG)?

	<input type="text"/>	<input type="button" value="Up"/>
	<input type="text"/>	<input type="button" value="Down"/>

Deployed Spouse Survey

5.

1. Please check the circle that best describes how you have been feeling during the past month regarding your relationships with other people.

	Strongly Disagree	Disagree	Agree	Strongly Agree
There are people I know will help me if I need it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I do not have close relationships with other people.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is no one I can turn to in times of stress.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There are people who call on me to help them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There are people who like the same social activities I do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other people do not think I am good at what I do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel responsible for taking care of someone else.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am with a group of people who think the same way I do about things.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I do not think that other people respect what I do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If something went wrong, no one would help me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have close relationships that make me feel good.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have someone to talk to about decisions in my life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There are people who value my skills and abilities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is no one who has the same interests and concerns as me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is no one who needs me to take care of them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have a trustworthy person to turn to if I have problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel a strong emotional tie with at least one other person.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is no one I can count on for help if I really need it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is no one I feel comfortable talking about problems with.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There are people who admire my talents and abilities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I do not have a feeling of closeness with anyone.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is no one who likes to do the things I do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There are people I can count on in an emergency.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No one needs me to take care of him or her.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Deployed Spouse Survey

6.

1. How many people within one hour of your home do you feel you can depend on or feel close to (excluding family members)?

2. How many times during the past week did you spend time with someone who does not live with you? For example, you went to see them, they came to visit you, or you went out together.

- | | |
|-----------------------------|-------------------------------------|
| <input type="radio"/> None | <input type="radio"/> Four |
| <input type="radio"/> One | <input type="radio"/> Five |
| <input type="radio"/> Two | <input type="radio"/> Six |
| <input type="radio"/> Three | <input type="radio"/> Seven or More |

3. How many times did you speak to someone (friends, family, or others) on the telephone this past week?

- | | |
|-----------------------------|-------------------------------------|
| <input type="radio"/> None | <input type="radio"/> Four |
| <input type="radio"/> One | <input type="radio"/> Five |
| <input type="radio"/> Two | <input type="radio"/> Six |
| <input type="radio"/> Three | <input type="radio"/> Seven or More |

4. How often did you go to meetings of social clubs, religious organizations, or other groups that you belong to this past week?

- | | |
|-----------------------------|-------------------------------------|
| <input type="radio"/> None | <input type="radio"/> Four |
| <input type="radio"/> One | <input type="radio"/> Five |
| <input type="radio"/> Two | <input type="radio"/> Six |
| <input type="radio"/> Three | <input type="radio"/> Seven or More |

5. How often does it seem that your family and friends understand you?

- ☐ Hardly Ever
- ☐ Some of the Time
- ☐ Most of the Time

6. How often do you feel useful to your family and friends?

- ☐ Hardly Ever
- ☐ Some of the Time
- ☐ Most of the Time

Deployed Spouse Survey

7. How often do you know what is going on with your family and friends?

- ☐ Hardly Ever
- ☐ Some of the Time
- ☐ Most of the Time

8. When you are talking with your family and friends, how often do you feel you are being listened to?

- ☐ Hardly Ever
- ☐ Some of the Time
- ☐ Most of the Time

9. How often do you feel you have a definitive role in your family and among your friends?

- ☐ Hardly Ever
- ☐ Some of the Time
- ☐ Most of the Time

10. How often can you talk about your greatest problems with at least some of your family and friends?

- ☐ Hardly Ever
- ☐ Some of the Time
- ☐ Most of the Time

11. How satisfied are you with the kinds of relationships you have with your family and friends?

- ☐ Very Dissatisfied
- ☐ Somewhat Dissatisfied
- ☐ Satisfied

Deployed Spouse Survey

7.

1. Below is a list of ways you might have felt or behaved. Please check the circle that corresponds to how often you felt this way during the past week.

	Rarely (<1 Day)	Sometimes (1-2 Days)	Occasionally (3-4 Days)	Often (5-7 Days)
I was bothered by things that usually don't bother me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I did not feel like eating; my appetite was poor.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt that I could not shake off the blues even with help from my family or friends.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt I was just as good as other people.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I had trouble keeping my mind on what I was doing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt depressed.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt that everything I did was an effort.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt hopeful about the future.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I thought my life had been a failure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt fearful.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My sleep was restless.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was happy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I talked less than usual.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt lonely.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People were unfriendly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I enjoyed life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I had crying spells.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt sad.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt that people dislike me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I could not get going.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Deployed Spouse Survey

8.

1. Please check the circle for each statement that describes how much each problem has bothered you during the past month.

	Not Bothered				Extremely Bothered
Sleep Problems (unable to fall asleep or wake up frequently)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Weight Change (gain or loss of 5 lbs. or more)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Back Pain	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Constipation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dizziness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Diarrhea	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Faintness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Constant Fatigue	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Headache	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Migraines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nausea/Vomiting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Indigestion/Acid Stomach	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stomach Pain (cramps)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hot or Cold Spells	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Trembling Hands	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Poor Appetite	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Shortness of Breath (when not exercising)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Numbness or Tingling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Weak All Over	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heart/Chest Pain	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feel Low in Energy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stuffy Nose/Head	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Blurred Vision	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Muscle Tension/Soreness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Muscle Cramps	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Severe Aches/Pains	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Acne	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bruises	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nosebleeds	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pulled (Strained) Muscles	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pulled (Strained) Ligaments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cold/Cough	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Deployed Spouse Survey

9.

1. These items deal with the ways you have been coping with the stress in your life since your spouse deployed. There are many ways to deal with problems, so please indicate what you generally did and felt when you experienced stressful events in the past month.

	Never	Rarely	Sometimes	Regularly
I turned to work or other activities to take my mind off things.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I concentrated my efforts on doing something about the situation I was in.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I said to myself "this isn't real".	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I used alcohol or drugs to make myself feel better.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I got emotional support from others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I gave up trying to deal with it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I took action to try and make the situation better.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I refused to believe that it happened.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I said things to let my unpleasant feelings escape.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I got help and advice from people.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I used alcohol or other drugs to help me get through it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tried to see it in a different light, to make it seem more positive.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I criticized myself.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tried to come up with a strategy about what to do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I got comfort and understanding from someone.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I gave up the attempt to cope.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I looked for something good in what happened.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I made jokes about it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I did something to think about it less, such as went to the movies, watched TV, slept, or went shopping.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I accepted the reality of the fact that it happened.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I expressed my negative feelings.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tried to find comfort in my religion or spiritual beliefs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tried to get advice or help from other people about what to do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I learned to live with it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I thought hard about what steps to take.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I blamed myself for things that happened.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I prayed or meditated.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I made fun of the situation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Deployed Spouse Survey

10.

1. Please indicate how much you agree with the following statements concerning how you have been feeling since your spouse deployed.

	Not True At All	Rarely True	Sometimes True	Often True	Always True
I am able to adapt when changes occur.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have at least one close and secure relationship which helps me when I am stressed.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When there are no clear solutions to my problems, sometimes fate or God can help.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can deal with whatever comes my way.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Past successes give me confidence in dealing with new challenges and difficulties.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I try to see the humorous side of things when I am faced with problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Having to cope with stress can make me stronger.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tend to bounce back after illness, injury, or other hardships.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Good or bad, I believe that most things happen for a reason.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I give my best effort, no matter what the outcome may be.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe I can achieve my goals, even if there are obstacles.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Even when things look hopeless, I do not give up.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
During times of stress/crisis, I know where to turn for help.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Under pressure, I stay focused and think clearly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I prefer to take the lead in solving problems, rather than letting others make all the decisions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am not easily discouraged by failure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think of myself as a strong person when dealing with life's challenges and difficulties.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can make unpopular or difficult decisions that affect other people, if it is necessary.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am able to handle unpleasant or painful feelings like sadness, fear, and anger.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In dealing with life's problems, sometimes you have to act on a hunch, without knowing why.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have a strong sense of purpose in life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel in control of my life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like challenges.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I work to attain my goals, no matter what roadblocks I encounter along the way.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I take pride in my achievements.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Deployed Spouse Survey

11.

1. Please indicate whether you have experienced each situation during the past year. If your answer is YES, please specify how undesirable, negative, or upsetting the situation was and how long the situation has been going on.

	Experienced	If YES, how undesirable, negative, or upsetting?	If YES, how long has this been going on?
Not Enough Time To Get Things Done	<input type="text"/>	<input type="text"/>	<input type="text"/>
Pregnancy or Birth of a Child	<input type="text"/>	<input type="text"/>	<input type="text"/>
Promotion of Self or Spouse	<input type="text"/>	<input type="text"/>	<input type="text"/>
Death of a Family Member or Friend	<input type="text"/>	<input type="text"/>	<input type="text"/>
Too Many Bills	<input type="text"/>	<input type="text"/>	<input type="text"/>
Spouse Missing Important Dates (Anniversaries, Birthdays, etc.)	<input type="text"/>	<input type="text"/>	<input type="text"/>
Separation From Spouse	<input type="text"/>	<input type="text"/>	<input type="text"/>
Acting as a Single Parent	<input type="text"/>	<input type="text"/>	<input type="text"/>
Permanent Change of Duty Station	<input type="text"/>	<input type="text"/>	<input type="text"/>
Issues with Trust (i.e. Infidelity)	<input type="text"/>	<input type="text"/>	<input type="text"/>
Financial Problems	<input type="text"/>	<input type="text"/>	<input type="text"/>
Children Acting Out or Rebellious	<input type="text"/>	<input type="text"/>	<input type="text"/>
Lack of Communication with Spouse	<input type="text"/>	<input type="text"/>	<input type="text"/>
Feeling Isolated	<input type="text"/>	<input type="text"/>	<input type="text"/>
Spouse in Combat Zone	<input type="text"/>	<input type="text"/>	<input type="text"/>
Lack of Benefits	<input type="text"/>	<input type="text"/>	<input type="text"/>
Loss of a Friend	<input type="text"/>	<input type="text"/>	<input type="text"/>
Negative Rumors	<input type="text"/>	<input type="text"/>	<input type="text"/>
Experience with Anti-War or Anti-Military Groups	<input type="text"/>	<input type="text"/>	<input type="text"/>
Home Repairs	<input type="text"/>	<input type="text"/>	<input type="text"/>
Starting or Finishing School	<input type="text"/>	<input type="text"/>	<input type="text"/>
Fear for Spouse's Safety	<input type="text"/>	<input type="text"/>	<input type="text"/>
Illness	<input type="text"/>	<input type="text"/>	<input type="text"/>
Crime	<input type="text"/>	<input type="text"/>	<input type="text"/>
Lack of Concern from Military	<input type="text"/>	<input type="text"/>	<input type="text"/>
Beginning or Losing a Job	<input type="text"/>	<input type="text"/>	<input type="text"/>
Auto Repairs	<input type="text"/>	<input type="text"/>	<input type="text"/>

Deployed Spouse Survey

12.

1. Briefly describe the most stressful military situation you have experienced during your spouse's deployment.

2. Approximately when did this event occur (MM/YYYY)?

3. Please select the response that best describes the experience that you just recounted.

	Strongly Disagree	Disagree	Agree	Strongly Agree
I believe my stressful situation was controllable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There was nothing that could have been done about my stressful situation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe my stressful situation was out of my control.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Little could have been done to change my stressful situation for the better.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Deployed Spouse Survey

13.

1. Please read each item below and indicate to what extent you used it in the situation you just described.

	Never Used	Used Some	Used Quite a Bit	Used a Great Deal
I just concentrated on what I had to do next - the next step.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tried to analyze the problem in order to understand it better.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I turned to work or substitute activities to take my mind off things.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt that time would make a difference - the only thing to do was wait.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I bargained or compromised to get something positive from the situation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I did something that I did not think would work, but at least I was doing something.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tried to get the person responsible to change his or her mind.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I talked to someone to find out more about the situation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I criticized or lectured myself.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tried not to burn my bridges, but leave things open somewhat.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I hoped a miracle would happen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I went along with fate; sometimes I just have bad luck.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I went on as if nothing had happened.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tried to keep my feelings to myself.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I looked for the silver lining; I tried to look at the bright side of things.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I slept more than usual.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I expressed my anger towards the person(s) who caused the problem.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I accepted sympathy and understanding from someone.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I told myself things that help me to feel better.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was inspired to do something creative.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tried to forget the whole thing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I got professional help.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I changed or grew as a person in a good way.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I waited to see what would happen before doing anything.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I apologized or did something to make up.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I made a plan of action and followed it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I accepted the next best thing to what I wanted.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I let my feelings out somehow.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I realized I brought the problem on myself.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I came out of the experience better than I went in.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I talked to someone who could do something concrete about the problem.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I got away from it for a while; tried to rest or take a vacation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tried to make myself feel better by eating, drinking, smoking, or using drugs/medications.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I took a big chance or did something very risky.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tried not to act too hastily or follow my first hunch.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I found new faith.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Deployed Spouse Survey

I maintained my pride.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I rediscovered what is important in life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I changed something so things would turn out all right.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I avoided being around people in general.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I did not let it get to me; I refused to think too much about it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I asked a relative or friend I respected for advice.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I kept others from knowing how bad things were.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I made light of the situation; I refused to get too serious about it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I talked to someone about how I was feeling.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I stood my ground and fought for what I wanted.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I took it out on other people.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I drew on my past experiences.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I knew what had to be done, so I doubled my efforts to make things work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I refused to believe what had happened.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I made a promise to myself that things would be different.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I came up with a couple different solutions to the problem.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I accepted it, since nothing could be done.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tried to keep my feelings from interfering with other things too much.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wished that I could change what had happened or how I felt.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I changed something about myself.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I daydreamed or imagined a better place than the one I was in.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wished that the situation would go away or somehow be over with.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I had fantasies or wished about how things might turn out.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I prayed.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I prepared myself for the worst.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I went over in my mind what I would say or do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I thought about how a person I admire would handle this situation and used that as a model.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tried to see things from the other person's point of view.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I reminded myself how much worse things could be.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I jogged or exercised.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Deployed Spouse Survey

14.

Thank you for taking the time to complete this survey. If you have any questions or concerns, please do not hesitate to contact the principal investigator at katiefaulk@mail.utexas.edu. Additionally, if you feel you are having issues coping with the issues of deployment, The Military and Family Life Consultant (MFLC) Program is designed to provide support to military family members. Their services are provided free of charge at the Oveta Culp Hobby Soldier & Family Readiness Center.

1. Please provide your mother's maiden name and first initial below. We would like to do a voluntary follow-up survey with you after your Soldier's return from deployment. Knowing your mother's maiden name will allow us to match up this survey with your future responses while allowing you to remain anonymous.

Mother's Maiden Name

Mother's First Initial

2. If you would like to be entered into a drawing for one of 50 Wal-Mart or AAFES gift certificates (valued at \$20) or 4 footballs and basketballs autographed by members of The University of Texas teams (valued at \$99), please provide your e-mail address.

Appendix F: Reunion Survey Recruitment Flyer



Appendix G: Reunion Survey Cover Letter

Dear Military Spouse,

I am a military spouse and graduate student at The University of Texas at Austin. As such, I am interested in learning more about the experiences of military spouses and how they cope with the many stressful situations that they face following the reunion between the spouse and Soldier.

The survey takes approximately 20-30 minutes to complete. All of your responses will be strictly anonymous and the records of this study will be stored securely. Your responses can in no way be linked to your identity. Your decision to participate or not will not affect your present or future relationship with The University of Texas at Austin or the United States Army. Although participation is voluntary, we feel that your responses are very important in increasing the understanding of the impact that military lifestyle has on spouses.

In an effort to thank you for your time, you may choose to be entered into a drawing for one of many prizes following your completion of the survey. The prizes include 50 gift certificates to Wal-Mart and AAFES (valued at \$20 each) and autographed memorabilia from The University of Texas football and basketball teams (2 footballs and 2 basketballs valued at \$99 each).

If you have any questions, please do not hesitate to contact us by phone or email: katiefaulk@mail.utexas.edu at (503) 860-2237, or msteinhardt@mail.utexas.edu at (512) 232-3535. If you have questions about your rights as a research participant, complaints, concerns, or questions about the research please contact Jody Jensen, Ph.D., Chair, The University of Texas at Austin Institutional Review Board for the Protection of Human Subjects at (512) 232-2685 or the Office of Research Support at (512) 471-8871 or email: orssc@uts.cc.utexas.edu. Thank you in advance for your time and cooperation in participating in this important study.

Sincerely,

Katie Faulk, BS, BA
Masters Candidate
Department of Kinesiology and Health Education

Mary Steinhardt, EdD, LPC
Professor and Faculty Advisor
Department of Kinesiology and Health Education

Appendix H: Reunion Survey Items

Reunited Spouse Survey

3.

1. What is your age?

2. What is your gender?

- ☐ Male
- ☐ Female

3. What is your race?

- ☐ White
- ☐ Black/African American
- ☐ Hispanic/Latino
- ☐ American Indian
- ☐ Pacific Islander
- ☐ Asian
- ☐ Other (please specify)

4. What is the highest grade you have completed in school?

- | | |
|---|--|
| <input type="radio"/> Elementary School | <input type="radio"/> Some College |
| <input type="radio"/> Junior High/Middle School | <input type="radio"/> Associate's Degree |
| <input type="radio"/> Some High School | <input type="radio"/> Bachelor's Degree |
| <input type="radio"/> High School | <input type="radio"/> Post-Graduate |

5. What is your occupation?

6. Where is your primary residence?

- ☐ On-Post Housing
- ☐ Off-Post House
- ☐ Off-Post Apartment
- ☐ Other (please specify)

Reunited Spouse Survey

7. Do you have children?

- ☐ Yes
- ☐ No
- ☐ Expecting

If yes, how old?

8. How long have you been married?

9. How long have you been a military spouse?

10. How satisfied are you with your marriage?

	Very										Very
	Unsatisfied										Satisfied
Marital Satisfaction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11. What is your spouse's rank?

12. What is your spouse's status?

- ☐ Active Duty
- ☐ Reservist
- ☐ National Guard

13. What is your spouse's Estimated Time of Separation (ETS) date (MM/YYYY)?

14. Does your spouse plan to reenlist?

- ☐ Yes
- ☐ No
- ☐ Unsure

15. How many times has your spouse been deployed?

16. When did your spouse return from the deployment (MM/YYYY)?

Reunited Spouse Survey

4.

1. Do you attend Family Readiness Group (FRG) meetings and events?

☐ Yes

☐ No

2. How often do you attend Family Readiness Group (FRG) meetings and events?

	Never								Always
Frequency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. What do you like best about the Family Readiness Group (FRG)?

	<input type="text"/>
	<input type="text"/>

4. What do you like least about the Family Readiness Group (FRG)?

	<input type="text"/>
	<input type="text"/>

Reunited Spouse Survey

5.

1. Please check the circle that best describes how you have been feeling during the past month regarding your relationships with other people.

	Strongly Disagree	Disagree	Agree	Strongly Agree
There are people I know will help me if I need it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I do not have close relationships with other people.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is no one I can turn to in times of stress.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There are people who call on me to help them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There are people who like the same social activities I do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other people do not think I am good at what I do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel responsible for taking care of someone else.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am with a group of people who think the same way I do about things.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I do not think that other people respect what I do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If something went wrong, no one would help me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have close relationships that make me feel good.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have someone to talk to about decisions in my life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There are people who value my skills and abilities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is no one who has the same interests and concerns as me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is no one who needs me to take care of them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have a trustworthy person to turn to if I have problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel a strong emotional tie with at least one other person.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is no one I can count on for help if I really need it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is no one I feel comfortable talking about problems with.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There are people who admire my talents and abilities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I do not have a feeling of closeness with anyone.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is no one who likes to do the things I do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There are people I can count on in an emergency.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No one needs me to take care of him or her.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Reunited Spouse Survey

6.

1. How many people within one hour of your home do you feel you can depend on or feel close to (excluding family members)?

2. How many times during the past week did you spend time with someone who does not live with you? For example, you went to see them, they came to visit you, or you went out together.

- | | |
|-----------------------------|-------------------------------------|
| <input type="radio"/> None | <input type="radio"/> Four |
| <input type="radio"/> One | <input type="radio"/> Five |
| <input type="radio"/> Two | <input type="radio"/> Six |
| <input type="radio"/> Three | <input type="radio"/> Seven or More |

3. How many times did you speak to someone (friends, family, or others) on the telephone this past week?

- | | |
|-----------------------------|-------------------------------------|
| <input type="radio"/> None | <input type="radio"/> Four |
| <input type="radio"/> One | <input type="radio"/> Five |
| <input type="radio"/> Two | <input type="radio"/> Six |
| <input type="radio"/> Three | <input type="radio"/> Seven or More |

4. How often did you go to meetings of social clubs, religious organizations, or other groups that you belong to this past week?

- | | |
|-----------------------------|-------------------------------------|
| <input type="radio"/> None | <input type="radio"/> Four |
| <input type="radio"/> One | <input type="radio"/> Five |
| <input type="radio"/> Two | <input type="radio"/> Six |
| <input type="radio"/> Three | <input type="radio"/> Seven or More |

5. How often does it seem that your family and friends understand you?

- ☐ Hardly Ever
- ☐ Some of the Time
- ☐ Most of the Time

6. How often do you feel useful to your family and friends?

- ☐ Hardly Ever
- ☐ Some of the Time
- ☐ Most of the Time

Reunited Spouse Survey

7. How often do you know what is going on with your family and friends?

- ☐ Hardly Ever
- ☐ Some of the Time
- ☐ Most of the Time

8. When you are talking with your family and friends, how often do you feel you are being listened to?

- ☐ Hardly Ever
- ☐ Some of the Time
- ☐ Most of the Time

9. How often do you feel you have a definitive role in your family and among your friends?

- ☐ Hardly Ever
- ☐ Some of the Time
- ☐ Most of the Time

10. How often can you talk about your greatest problems with at least some of your family and friends?

- ☐ Hardly Ever
- ☐ Some of the Time
- ☐ Most of the Time

11. How satisfied are you with the kinds of relationships you have with your family and friends?

- ☐ Very Dissatisfied
- ☐ Somewhat Dissatisfied
- ☐ Satisfied

Reunited Spouse Survey

7.

1. Below is a list of ways you might have felt or behaved. Please check the circle that corresponds to how often you felt this way during the past week.

	Rarely (<1 Day)	Sometimes (1-2 Days)	Occasionally (3-4 Days)	Often (5-7 Days)
I was bothered by things that usually don't bother me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I did not feel like eating; my appetite was poor.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt that I could not shake off the blues even with help from my family or friends.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt I was just as good as other people.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I had trouble keeping my mind on what I was doing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt depressed.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt that everything I did was an effort.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt hopeful about the future.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I thought my life had been a failure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt fearful.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My sleep was restless.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was happy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I talked less than usual.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt lonely.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People were unfriendly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I enjoyed life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I had crying spells.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt sad.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt that people dislike me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I could not get going.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Reunited Spouse Survey

8.

1. Please check the circle for each statement that describes how much each problem has bothered you during the past month.

	Not Bothered				Extremely Bothered
Sleep Problems (unable to fall asleep or wake up frequently)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Weight Change (gain or loss of 5 lbs. or more)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Back Pain	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Constipation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dizziness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Diarrhea	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Faintness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Constant Fatigue	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Headache	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Migraines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nausea/Vomiting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Indigestion/Acid Stomach	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stomach Pain (cramps)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hot or Cold Spells	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Trembling Hands	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Poor Appetite	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Shortness of Breath (when not exercising)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Numbness or Tingling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Weak All Over	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heart/Chest Pain	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feel Low in Energy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stuffy Nose/Head	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Blurred Vision	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Muscle Tension/Soreness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Muscle Cramps	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Severe Aches/Pains	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Acne	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bruises	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nosebleeds	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pulled (Strained) Muscles	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pulled (Strained) Ligaments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cold/Cough	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Reunited Spouse Survey

9.

1. These items deal with the ways you have been coping with the stress in your life since your spouse returned from deployment. There are many ways to deal with problems, so please indicate what you generally did and felt when you experienced stressful events after reuniting with your spouse.

	Never	Rarely	Sometimes	Regularly
I turned to work or other activities to take my mind off things.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I concentrated my efforts on doing something about the situation I was in.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I said to myself "this isn't real".	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I used alcohol or drugs to make myself feel better.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I got emotional support from others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I gave up trying to deal with it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I took action to try and make the situation better.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I refused to believe that it happened.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I said things to let my unpleasant feelings escape.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I got help and advice from people.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I used alcohol or other drugs to help me get through it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tried to see it in a different light, to make it seem more positive.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I criticized myself.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tried to come up with a strategy about what to do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I got comfort and understanding from someone.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I gave up the attempt to cope.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I looked for something good in what happened.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I made jokes about it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I did something to think about it less, such as went to the movies, watched TV, slept, or went shopping.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I accepted the reality of the fact that it happened.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I expressed my negative feelings.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tried to find comfort in my religion or spiritual beliefs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tried to get advice or help from other people about what to do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I learned to live with it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I thought hard about what steps to take.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I blamed myself for things that happened.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I prayed or meditated.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I made fun of the situation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Reunited Spouse Survey

10.

1. Please indicate how much you agree with the following statements concerning how you have been feeling since being reunited with your spouse.

	Not True At All	Rarely True	Sometimes True	Often True	Always True
I am able to adapt when changes occur.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have at least one close and secure relationship which helps me when I am stressed.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When there are no clear solutions to my problems, sometimes fate or God can help.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can deal with whatever comes my way.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Past successes give me confidence in dealing with new challenges and difficulties.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I try to see the humorous side of things when I am faced with problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Having to cope with stress can make me stronger.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tend to bounce back after illness, injury, or other hardships.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Good or bad, I believe that most things happen for a reason.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I give my best effort, no matter what the outcome may be.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe I can achieve my goals, even if there are obstacles.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Even when things look hopeless, I do not give up.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
During times of stress/crisis, I know where to turn for help.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Under pressure, I stay focused and think clearly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I prefer to take the lead in solving problems, rather than letting others make all the decisions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am not easily discouraged by failure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think of myself as a strong person when dealing with life's challenges and difficulties.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can make unpopular or difficult decisions that affect other people, if it is necessary.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am able to handle unpleasant or painful feelings like sadness, fear, and anger.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In dealing with life's problems, sometimes you have to act on a hunch, without knowing why.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have a strong sense of purpose in life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel in control of my life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like challenges.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I work to attain my goals, no matter what roadblocks I encounter along the way.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I take pride in my achievements.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Reunited Spouse Survey

11.

1. Please indicate whether you have experienced each situation during the past year. If your answer is YES, please specify how undesirable, negative, or upsetting the situation was and how long the situation has been going on.

	Experienced	If YES, how undesirable, negative, or upsetting?	If YES, how long has this been going on?
Not Enough Time To Get Things Done	<input type="text"/>	<input type="text"/>	<input type="text"/>
Pregnancy or Birth of a Child	<input type="text"/>	<input type="text"/>	<input type="text"/>
Promotion of Self or Spouse	<input type="text"/>	<input type="text"/>	<input type="text"/>
Death of a Family Member or Friend	<input type="text"/>	<input type="text"/>	<input type="text"/>
Shift in Family Roles	<input type="text"/>	<input type="text"/>	<input type="text"/>
Too Many Bills	<input type="text"/>	<input type="text"/>	<input type="text"/>
Permanent Change of Duty Station	<input type="text"/>	<input type="text"/>	<input type="text"/>
Issues with Trust (i.e. Infidelity)	<input type="text"/>	<input type="text"/>	<input type="text"/>
Financial Problems	<input type="text"/>	<input type="text"/>	<input type="text"/>
Children Acting Out or Rebellious	<input type="text"/>	<input type="text"/>	<input type="text"/>
Feeling Isolated	<input type="text"/>	<input type="text"/>	<input type="text"/>
Spouse Working Long, Odd Hours	<input type="text"/>	<input type="text"/>	<input type="text"/>
Lack of Benefits	<input type="text"/>	<input type="text"/>	<input type="text"/>
Post-Traumatic Stress Disorder	<input type="text"/>	<input type="text"/>	<input type="text"/>
Differing Opinions in Parenting	<input type="text"/>	<input type="text"/>	<input type="text"/>
Loss of a Friend	<input type="text"/>	<input type="text"/>	<input type="text"/>
Physical Injuries of Spouse	<input type="text"/>	<input type="text"/>	<input type="text"/>
Negative Rumors	<input type="text"/>	<input type="text"/>	<input type="text"/>
Jealousy of Spouse	<input type="text"/>	<input type="text"/>	<input type="text"/>
Experience with Anti-War or Anti-Military Groups	<input type="text"/>	<input type="text"/>	<input type="text"/>
Home Repairs	<input type="text"/>	<input type="text"/>	<input type="text"/>
Starting or Finishing School	<input type="text"/>	<input type="text"/>	<input type="text"/>
Illness	<input type="text"/>	<input type="text"/>	<input type="text"/>
Competition for Spouse's Attention	<input type="text"/>	<input type="text"/>	<input type="text"/>
Crime	<input type="text"/>	<input type="text"/>	<input type="text"/>
Pressure to Return to Normalcy (Pre-Deployment Levels)	<input type="text"/>	<input type="text"/>	<input type="text"/>
Lack of Concern from Military	<input type="text"/>	<input type="text"/>	<input type="text"/>
Beginning or Losing a Job	<input type="text"/>	<input type="text"/>	<input type="text"/>
Auto Repairs	<input type="text"/>	<input type="text"/>	<input type="text"/>

Reunited Spouse Survey

12.

1. Briefly describe the most stressful military situation you have experienced since your spouse returned home from deployment.

2. Approximately when did this event occur (MM/YYYY)?

3. Please select the response that best describes the experience that you just recounted.

	Strongly Disagree	Disagree	Agree	Strongly Agree
I believe my stressful situation was controllable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There was nothing that could have been done about my stressful situation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe my stressful situation was out of my control.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Little could have been done to change my stressful situation for the better.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Reunited Spouse Survey

13.

1. Please read each item below and indicate to what extent you used it in the situation you just described.

	Never Used	Used Some	Used Quite A Bit	Used A Great Deal
I just concentrated on what I had to do next - the next step.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tried to analyze the problem in order to understand it better.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I turned to work or substitute activities to take my mind off things.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt that time would make a difference - the only thing to do was wait.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I bargained or compromised to get something positive from the situation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I did something that I did not think would work, but at least I was doing something.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tried to get the person responsible to change his or her mind.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I talked to someone to find out more about the situation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I criticized or lectured myself.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tried not to burn my bridges, but leave things open somewhat.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I hoped a miracle would happen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I went along with fate; sometimes I just have bad luck.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I went on as if nothing had happened.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tried to keep my feelings to myself.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I looked for the silver lining; I tried to look at the bright side of things.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I slept more than usual.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I expressed my anger towards the person(s) who caused the problem.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I accepted sympathy and understanding from someone.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I told myself things that help me to feel better.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was inspired to do something creative.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tried to forget the whole thing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I got professional help.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I changed or grew as a person in a good way.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I waited to see what would happen before doing anything.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I apologized or did something to make up.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I made a plan of action and followed it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I accepted the next best thing to what I wanted.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I let my feelings out somehow.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I realized I brought the problem on myself.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I came out of the experience better than I went in.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I talked to someone who could do something concrete about the problem.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I got away from it for a while; tried to rest or take a vacation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tried to make myself feel better by eating, drinking, smoking, or using drugs/medications.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I took a big chance or did something very risky.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tried not to act too hastily or follow my first hunch.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I found new faith.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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I maintained my pride.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I rediscovered what is important in life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I changed something so things would turn out all right.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I avoided being around people in general.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I did not let it get to me; I refused to think too much about it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I asked a relative or friend I respected for advice.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I kept others from knowing how bad things were.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I made light of the situation; I refused to get too serious about it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I talked to someone about how I was feeling.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I stood my ground and fought for what I wanted.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I took it out on other people.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I drew on my past experiences.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I knew what had to be done, so I doubled my efforts to make things work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I refused to believe what had happened.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I made a promise to myself that things would be different.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I came up with a couple different solutions to the problem.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I accepted it, since nothing could be done.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tried to keep my feelings from interfering with other things too much.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wished that I could change what had happened or how I felt.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I changed something about myself.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I daydreamed or imagined a better place than the one I was in.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wished that the situation would go away or somehow be over with.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I had fantasies or wished about how things might turn out.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I prayed.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I prepared myself for the worst.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I went over in my mind what I would say or do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I thought about how a person I admire would handle this situation and used that as a model.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I tried to see things from the other person's point of view.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I reminded myself how much worse things could be.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I jogged or exercised.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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14.

Thank you for taking the time to complete this survey. If you have any questions or concerns, please do not hesitate to contact the principal investigator at katiefaulk@mail.utexas.edu. Additionally, if you feel you are having issues coping with the issues of reintegration, The Military and Family Life Consultant (MFLC) Program is designed to provide support to military family members. Their services are provided free of charge at the Oveta Culp Hobby Soldier & Family Readiness Center.

1. Please provide your mother's maiden name and first initial below. We would like to do a follow-up survey with you after your Soldier's return from deployment. Knowing your mother's maiden name will allow us to match up this survey with your future responses while allowing you to remain anonymous.

Mother's Maiden Name

Mother's First Initial

2. If you would like to be entered into a drawing for one of 50 Wal-Mart or AAFES gift certificates (valued at \$20) or 4 footballs and basketballs autographed by members of The University of Texas teams (valued at \$99), please provide your e-mail address.

Appendix I: Physical Symptoms Path Analysis Results

The test of the overall fit for the hypothesized model in Figure 1.3 suggests that the model was not a good fit for the data ($\chi^2 = 32.528, p < .001$). In addition, the fit indices were inconsistent, with two indicating good model fit (CFI = .959, SRMR = .022) and two indicating poor model fit (TLI = .750, RMSEA = .102).

With regard to the demographic variables, only marital satisfaction was significantly related to positive emotions, with higher marital satisfaction resulting in more positive emotions experienced ($\beta = .26, p < .001$). In terms of the direct effects, military wives who experienced more positive emotions reported more adaptive coping ($\beta = .72, p < .001$) and resilience ($\beta = .19, p < .001$) and less maladaptive coping ($\beta = -.37, p < .001$). Of the three personal resources, maladaptive coping ($\beta = .39, p < .01$) had a strong positive relationship with depressive symptoms, while adaptive coping ($\beta = -.14, p = .27$) and resilience ($\beta = -.11, p = .31$) were not significantly related to physical symptoms. The direct path between positive emotions and physical symptoms was nonsignificant ($\beta = .03, p = .79$), suggesting a fully mediated model.

In terms of the indirect effect of positive emotions on physical symptoms, the indirect effect via maladaptive coping ($\beta = -.14, p < .01$) was small and negative, whereas the indirect effects via adaptive coping ($\beta = -.10, p = .27$) and resilience ($\beta = -.02, p = .33$) were nonsignificant. Taking together the direct and indirect effects, the total effect of positive emotions on physical symptoms was moderate and negative ($\beta = -.30, p < .01$). The model accounted for 24% of the total variance in physical symptoms.

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Vita

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